```
RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dβ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-24 (1-110) x AAF59080 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                            MIP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                          AAF59068 standard; DNA; 384 BP
                                                   Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e\cdot g. bone and
                                                                                                                                                                                                                                                        WO200102564-A1
                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                        Mouse MLP nucleotide sequence SEQ ID NO:10.
                                                                                                                                                                                                                                                                                                                                                                               23-APR-2001 (first entry)
                  Claim 11; Page 93; 111pp; Japanese.
                                                                                                 P-PSDB; AAB69125.
                                                                                                                                           Itoh Y,
                                                                                                                                                                                      30-JUN-1999;
                                                                                                                                                                                                             29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                   11-JAN-2001
                                                                                                                                                                 (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                           2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                       99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             547.00
96.36%
90.00%
92.71%
                                                                                                                                           Ogi K, Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative: Mismatches: Indels: Gaps:
                                                                                                                                            Ś
                                                                                                                                            Mogi
                                                                                                                                            ώ
                                                                                                                                           Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00479
                                                                                                                                             Yoshimura
                                                     joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

The present invention describes novel

MLP proteins

and

their encoding

```
AAFS9084
IX AAF
XX AAF
XX AAF
XX AAF
XX MUN
XX MUN
XX MUN
XX MUN
XX MUN
XX MUN
XX INN

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ពិភិពិពិភិពិនិន្ន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-24 (1-110) x AAF59068 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
Itoh Y,
Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 384 BP; 98 A; 68 C; 111 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLP; MIA; melanoma inhibitory activity; cancer; bone disease;
joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse MLP nucleotide sequence SEQ ID NO:30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF59084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF59084 standard; DNA;
                                                                                                                                                 30-JUN-1999;
                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                      11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus.
                                                                                         (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal 20
                           Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                    99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.68e-69
547.00
96.36%
90.00%
92.71%
                           Ogi K, Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                              Mogi S,
                           Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     384
99
7
0
                                 Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
```

```
AAF59099
ID AAF59
XX AAF69
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            XXCCCCCCCXXXX11111XXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-24 (1-110) x AAF59084 (1-947)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAP59063 to AAP59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                       MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 947 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 2; Page 100-101; 111pp; Japanese.
                                                                                                                                                                                                                                                                              Rat MLP nucleotide sequence SEQ ID NO:48
                                                                                                                                                                                                                                                                                                                                               23-APR-2001 (first entry)
                                                                Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF59099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrPheProArgAsnLeuVaiLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard; DNA; 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279 A; 158 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.32e-68
547.00
96.36%
90.00%
92.71%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221 G; 289 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        947
99
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
```

```
Ş
                                                            밁
                                                                                        S
                                                                                                                          밁
                                                                                                                                                      S
                                                                                                                                                                                         밁
                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
 片
                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-24 (1-110) x AAF59099 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 12; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; AAB69131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 330 BP; 91 A; 62 C; 91 G; 86 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TAKE ) TAKEDA CHEM IND LTD
301
                               101
                                                                                                                            181
                                                                                                                                                                                          121
                                                                                           81
                                                                                                                                                          61
                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                       1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                                                                                                                       TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nishi K, Ogi K, Ohkubo S, Mogi S,
                                                                                                                                                          GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                          TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                            GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                          AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                                                                                       TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                     CATGGCATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                              TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                               2.17e-68
541.00
95.45%
89.09%
91.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                   330
98
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yoshimura
                                                              300
                                                                                                                                                           80
                                                                                                                                                                                          180
                                                                                                                              240
                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                       60
```

Job time : Search completed: December 29, 136.647 secs 16:41:10

WO200102564-A1

```
Command line parameters:

-MODEL-frame+ p2n.model -DEV=xlh
-Q=Cgn2 1/USPTO_spool/US10019455/runat_29122003_160349_366/app_query.fasta_1.1770
-DB=Published_Applications_NA -QFMT=fastap_SUFFIx=rnpb -MINWATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100
-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXTEN=2000000000 -USER=US10019455 @CGN 1 1 412 @runat_29122003 160349 366
-NCPU=6 -ICPU=3 -NO_MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV TIMEOUT=120 -WAAN TIMEOUT=30 -THREADS=1 -XGAPCP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGĀPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                 10:
11:
12:
13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Published_Applications_NA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December 29, 2003, 19:57:30 ; Search time 246.807 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2244575 segs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HGIFMDRLASKKLCADDECV......RVYQEATKEVPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-24
                                                                                       GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (without alignments)
1527.048 Million cell updates/sec
```

	227111111 227654331110987654321
00.0 521 13 US-10-00-0 521 15 US-10-0 521	
21 13 US-10-21 13	
3 3 US-10-10-10-10-10-10-10-10-10-10-10-10-10-	N) N
216-163-71 219-063-71 219-063-71 219-066-71 219-067-71 219-069-71 219-069-71 219-526-71 219-530-71 219-531-71 219-531-71 219-531-71 219-531-71 219-531-71 219-531-71 219-531-71 219-68-71 219-68-71 219-68-71 219-68-71 219-466-71 219-466-71 219-466-71 219-466-71 219-466-71 219-466-71 219-466-71 219-466-71 219-466-71 219-466-71 219-466-71	\$-10-216-038-1 \$-10-216-163-71 \$-10-219-063-71 \$-10-219-066-71 \$-10-219-066-71 \$-10-219-069-71 \$-10-219-069-71 \$-10-219-073-71 \$-10-219-480-71 \$-10-219-480-71 \$-10-219-480-71 \$-10-219-525-71 \$-10-219-531-71 \$-10-219-531-71 \$-10-219-533-71 \$-10-219-533-71 \$-10-219-533-71 \$-10-219-533-71 \$-10-219-533-71 \$-10-219-533-71 \$-10-230-0437-73
quence 71 Apquence	equence 1, Applequence 71, App

ALIGNMENTS

RESULT 1 US-10-216-038-1

Sequence 1, Application US/10216038 Publication No. US20030124573A1

GENERAL INFORMATION:
APPLICANT: Mize, Nancy K
APPLICANT: Boyle, Bryan
APPLICANT: Ford, John E

Boyle, Bryan J Ford, John E Arterburn, Matthew C Tang, Y Tom

APPLICANT: APPLICANT: APPLICANT:

APPLICANT:

```
APPLICANT: Song, Yong
APPLICANT: Sjaastad, Michael
APPLICANT: Sjaastad, Michael
TITLE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth R-
TITLE OF INVENTION: Methods and Polynucleotides
FILE REFERENCE: HYS-70IP
CURRENT APPLICATION NUMBER: US/10/216,038
CURRENT FILING DATE: 2002-08-08
PRIOR APPLICATION NUMBER: US 09/563,786
PRIOR APPLICATION NUMBER: US 09/563,786
PRIOR FILING DATE: 2000-05-02
PRIOR APPLICATION NUMBER: US 09/491,404
PRIOR FILING DATE: 2000-01-25
NUMBER OF SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                                                                                                                                     Tang, Y Yom
Liu, Chenghua
Drmanac, Radoje T
```

Result

ŏ.

Query Score Match Length DB

Ħ

Description

SUMMARIES

```
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, J. Christopher
APPLICANT: Goddard, J. Christopher
APPLICANT: Seinaldi, J. Christopher
APPLICANT: Smith, Victoria
APPLICANT: Sephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
APPLICANT: NUMBER: US/10/216,163
CURRENT APPLICATION NUMBER: US/10/216,163
CURRENT APPLICATION NUMBER: 00/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-24 (1-110) x US-10-216-038-1 (1-426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; NAME/KEY: misc_feature
; LOCATION: (426)..(426)
; OTHER INFORMATION: n = A,
US-10-216-038-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 71, Application US/10216163 Publication No. US20030149239A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn version
SEQ ID NO 1
LENGTH: 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 253 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              193 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            133 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 TyrThr11eSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.17e-81
590.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            252
```

```
RESULT 3
US-10-218-765-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-24 (1-110) x US-10-216-163-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-12-17
PRIOR PRIOR DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                             Sequence 71, Application US/102 Publication No. US20030187201A1
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Paul J.
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 71
                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246\,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                             392 CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                                                        Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                  Application US/10218765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.56e-81
590.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             211
```

FILE REFERENCE: P3530P1C19
CURRENT APPLICATION NUMBER: US/10/218,765
CURRENT FILING DATE: 2002-08-12
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR PRILING DATE: 1997-10-28
PRIOR PRILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/081819
PRIOR APPLICATION NUMBER: 60/081819
PRIOR APPLICATION NUMBER: 60/08185
PRIOR APPLICATION NUMBER: 60/08195
PRIOR APPLICATION NUMBER: 60/08195
PRIOR APPLICATION NUMBER: 60/082804
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/084441
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/084441
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/084441
PRIOR APPLICATION NUMBER: 60/084441 PRIOR APPLICATION NUMBER: 60/085323
PRIOR FILING DATE: 1998-05-13
PRIOR PELICATION NUMBER: 60/08579
PRIOR APPLICATION NUMBER: 60/08579
PRIOR FILING DATE: 1998-05-15
PRIOR PELICATION NUMBER: 60/086392
PRIOR PELICATION NUMBER: 60/089532
PRIOR PELICATION NUMBER: 60/089532
PRIOR PELICATION NUMBER: 60/089532
PRIOR PELICATION NUMBER: 60/089538
PRIOR PELICATION NUMBER: 60/089905
PRIOR PELICATION NUMBER: 60/089905
PRIOR PELICATION NUMBER: 60/090472
PRIOR PELICATION NUMBER: 60/090472
PRIOR PELICATION NUMBER: 60/090472
PRIOR APPLICATION NUMBER: 60/090472 PRIOR OR FILING DATE: 1998-06-24
OR APPLICATION NUMBER: 60/090691
OR PILING DATE: 1998-06-25
OR FILING DATE: 1998-06-25
OR APPLICATION NUMBER: 60/091982
OR APPLICATION NUMBER: 60/091982
OR APPLICATION NUMBER: 60/095302
OR APPLICATION NUMBER: 60/095302
OR APPLICATION NUMBER: 60/095318
OR APPLICATION NUMBER: 60/095318
OR APPLICATION NUMBER: 60/095318
OR FILING DATE: 1998-08-04 DR FILING DATE: 1998-08-26

DR APPLICATION NUMBER: 60/098544

DR FILING DATE: 1998-08-31

DR APPLICATION NUMBER: 60/099596

DR FILING DATE: 1998-09-09

TR APPLICATION NUMBER: 60/099598

DR APPLICATION NUMBER: 60/099598

DR FILING DATE: 1998-09-09

DR APPLICATION NUMBER: 60/099803

DR FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/096791 FILING DATE: 1998-08-17 APPLICATION NUMBER: 60/097986 APPLICATION NUMBER: 60/095916 FILING DATE: 1998-08-10 APPLICATION NUMBER: 60/096146 FILING DATE: 1998-08-11 PRIOR APPLICATION NUMBER: 60/113605
PRIOR FILING DATE: 1998-12-23
PRIOR PRIOR PELICATION NUMBER: 60/113621
PRIOR APPLICATION NUMBER: 60/11558
PRIOR APPLICATION NUMBER: 60/11558
PRIOR APPLICATION NUMBER: 60/115565
PRIOR APPLICATION NUMBER: 60/11573
PRIOR FILING DATE: 1999-01-12
PRIOR APPLICATION NUMBER: 60/11573
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/123618
PRIOR FILING DATE: 1999-03-10
PRIOR PRIOR APPLICATION NUMBER: 60/12525
PRIOR FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: 60/12575
PRIOR APPLICATION NUMBER: 60/12575
PRIOR FILING DATE: 1999-03-23
PRIOR FILING DATE: 1999-03-23
PRIOR FILING DATE: 1999-03-23
PRIOR FILING DATE: 1999-03-23
PRIOR APPLICATION NUMBER: 60/126773
PRIOR APPLICATION NUMBER: 60/126773
PRIOR APPLICATION NUMBER: 60/127887
PRIOR APPLICATION NUMBER: 60/127887
PRIOR APPLICATION NUMBER: 60/127887
PRIOR FILING DATE: 1999-03-05
PRIOR APPLICATION NUMBER: 60/127887
PRIOR APPLICATION NUMBER: 60/127887
PRIOR FILING DATE: 1999-03-05
PRIOR APPLICATION NUMBER: 60/127887
PRIOR FILING DATE: 1999-03-05 PRIOR APPLICATION NUMBER: 60/130232 FILING DATE: 1999-04-21 APPLICATION NUMBER: 60/131022 APPLICATION NUMBER: 60/112422 FILING DATE: 1998-12-15 APPLICATION NUMBER: 60/113296 FILING DATE: 1998-12-22 APPLICATION NUMBER: 60/106905

PRIOR FILING DATE: 1998-09-10
PRIOR APPLICATION NUMBER: 60/100038
PRIOR FILING DATE: 1998-09-11
PRIOR APPLICATION NUMBER: 60/100385
PRIOR FILING DATE: 1998-09-15 PRIOR APPLICATION NUMBER: 60/099811
PRIOR FILING DATE: 1998-09-10
PRIOR APPLICATION NUMBER: 60/099812
PRIOR FILING DATE: 1998-09-10
PRIOR APPLICATION NUMBER: 60/099816 OR APPLICATION NUMBER: 60/100390
OR FILING DATE: 1998-09-15
OR APPLICATION NUMBER: 60/100627
OR FILING DATE: 1998-09-16
OR APPLICATION NUMBER: 60/100848
OR FILING DATE: 1998-09-11
OR APPLICATION NUMBER: 60/100919
OR FILING DATE: 1998-09-17
OR APPLICATION NUMBER: 60/101477
OR APPLICATION NUMBER: 60/101477
OR APPLICATION NUMBER: 60/10138
OR APPLICATION NUMBER: 60/101738
OR APPLICATION NUMBER: 60/101738

OR FILING DATE: 1998-09-24

OR APPLICATION NUMBER: 60/101741

OR FILING DATE: 1998-09-24

OR APPLICATION NUMBER: 60/101786

OR FILING DATE: 1998-09-25

OR APPLICATION NUMBER: 60/101916

OR APPLICATION NUMBER: 60/101912

OR APPLICATION NUMBER: 60/101922

OR FILING DATE: 1998-09-24

OR APPLICATION NUMBER: 60/106178

OR APPLICATION NUMBER: 60/106248

OR APPLICATION NUMBER: 60/106248

OR APPLICATION NUMBER: 60/106248

OR FILING DATE: 1998-10-29

OR APPLICATION NUMBER: 60/106248

OR FILING DATE: 1998-10-29

OR APPLICATION NUMBER: 60/106248

FILING DATE: 1998-11-17
APPLICATION NUMBER: 60/108801
FILING DATE: 1998-11-17
APPLICATION NUMBER: 60/108849 FILING DATE: 1998-11-1 APPLICATION NUMBER: 60/108787

```
Ś
                                                                                                                                                        밁
                                                                                                                                                                                         5
                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-24 (1-110) x US-10-218-765-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/169495
FILING DATE: 1999-12-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1999-12-07
APPLICATION NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1999-11-16
APPLICATION NUMBER: 60/169445
FILING DATE: 1999-12-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/166361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/149638
FILING DATE: 1999-08-17
APPLICATION NUMBER: 60/151733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/146963
FILING DATE: 1999-08-03
APPLICATION NUMBER: 60/149320
FILING DATE: 1999-08-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1999-07-26
APPLICATION NUMBER: 60/146222
FILING DATE: 1999-07-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/141037
FILING DATE: 1999-06-23
APPLICATION NUMBER: 60/144758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/140650
FILING DATE: 1999-06-22
APPLICATION NUMBER: 60/140723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1999-04-26
APPLICATION NUMBER: 60/131270
FILING DATE: 1999-04-27
APPLICATION NUMBER: 60/131291
FILING DATE: 1999-04-27
FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/164418 FILING DATE: 1999-11-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1999-08-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1999-07-20
APPLICATION NUMBER: 60/145698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/134287
FILING DATE: 1999-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/131445
FILING DATE: 1999-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1999-06-22
  392
                                      101
                                                                             332
                                                                                                                                                          272
                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                 152
                                                                                                                    81
                                                                                                                                                                                             13
                                                                                                                                                                                                                                                      41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                      92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                 1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                        ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                           GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly 80
                                                                                                                                                                                                                           AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGÁÁÁÁÁÍGGÁGCT 271
                                                                                                                                                                                                                                                                                                                                     TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
  CCCACCACGATATTGACTTCTTCTGCGAG
                                                                       TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                             TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnCluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.56e-81
590.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches: Indels:
421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          521
110
0
0
```

```
밁
                                                                                                                        Ş
                                                                                                                                                                          밁
                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-24 (1-110) x US-10-219-063-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo Sapien US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/219,063
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR PPLICATION NUMBER: 60/062287
PRIOR PPLICATION NUMBER: 60/062287
PRIOR PILING DATE: 1997-10-17
PRIOR PILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Baker, Kevin p
APPLICANT: Desnoyers, Lu
APPLICANT: Geritsen, Ma
APPLICANT: Goddard, Audr
APPLICANT: Godowski, Pau
APPLICANT: Grimaldi, J.
APPLICANT: Grimey, Austi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 71, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1998-03-27

Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OR APPLICATION NUMBER: 60/069873
OR FILING DATE: 1997-12-17
OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079294
OR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/079728
                                                                     212 AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                  41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                           21 TyrThrileSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                       92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                      1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                   TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10219063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US20030187202A1
                                                                                                                                                                                                                                                                                                                                                                                                       590.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.56e-81
                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
                                                                        271
                                                                                                                                                                 211
```

US-10-219-066-71

APPLICANT:
APPLICANT:
APPLICANT:

APPLICANT:

APPLICANT: AFPLICANT:

APPLICANT:

Ş 밁 Ś

81

392

```
US-10-019-455A-24 (1-110) x US-10-219-066-71 (1-521)
                                                                                                                                                                                                    Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo Sapien
US-10-219-066-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR PRIOR PELICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/069113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR PPLICATION NUMBER: 60/06349
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 71, Application US/10219066 Publication No. US20030187203A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-03-27

Remaining Prior Application data removed - See File Wrapper or PALM
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530PIC27 CURRENT APPLICATION NUMBER: US/10/219,066 CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1997-10-31
APPLICATION NUMBER: 60/069873
FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 ProThrThrAspIleAspPhePheCysGlu 110
                              272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                1.56e-81
590.00
100.00%
100.00%
                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                ; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-067-71
       Percent Similarity:
                                                     Pred. No.:
                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                         Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 71, Application US/10219067 Publication No. US20030187204A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PIC51
CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/052113
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/66287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kevin P
  1.56e-81
590.00
100.00%
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             211
```

밁 Ş

92

Score:

Percent Similarity:

Alignment Scores:

No.:

SEQ ID NO 71

LENGTH: 521

TYPE: DNA

```
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR PILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C31
CURRENT APPLICATION NUMBER: U5/10/219,068
CURRENT FILLING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-24 (1-110) x US-10-219-067-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 71, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Baker,
APPLICANT: Desnoy
APPLICANT: Gerrit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10219068
10. US20030187205A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211
```

```
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SCCRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE OF INVENTION: ACIDS ENCODING THE SAME
FILE OF INVENTION: ACIDS ENCODING THE SAME
FILE OF INVENTION NUMBER: US/10/219,069
CURRENT APPLICATION NUMBER: 10/119,460
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RF ILT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-24 (1-110) x US-10-219-068-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 71, Application No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
APPLICANT: Grimaidi, J. ch
APPLICANT: Gurney, Austin:
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerriteen, Mary
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AsnVaiLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrThrileSerLeuAlaSerAlaGinGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/10219069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.56e-81
590.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         521
110
0
```

271

211

```
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Besnoyers, Luc
APPLICANT: Gerriteen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, J. Christopher
APPLICANT: Godnard, J. Christopher
APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Wood, William I.
ITILE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
ITILE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: p3530P1C52
CURRENT APPLICATION NUMBER: US/10/219,073
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION DATE: 2002-08-14
PRIOR APPLICATION DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-219-073-71
; Sequence 71, Application US/10219073
; Publication No. US20030187207A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-24 (1-110) x US-10-219-069-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo Sapien
US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079726
PRIOR PPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 603-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AsnValLysGyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACGTTAAAAAAGGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.56e-81
590.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    151
```

APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul :
APPLICANT: Godowski, Chi
APPLICANT: Gurney, Austin I

Desnoyers, Luc Gerritsen, Mary Goddard, Audrey Goddwski, Paul J. Grimeldi, J. Christopher Gurney, Austin L. Smith, Victoria

US-10-219-475-71

GENERAL INFORMATION Sequence 71, Appropriate Publication No.

Application US/10219475 No. US20030187208A1

```
S
                                                                                   片
                                                                                                                      Ś
      밁
                                                                                                                                                                밁
                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-24 (1-110) x US-10-219-073-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/063549
FILING DATE: 1997-10-28
392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                            272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                           212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                           152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                    81 TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrlysGluVal 100
                                                                                                                                                                                   61 GlyGluPheTzpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                41 ASNValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                             21 TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                      92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                             TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.56e-81
590.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0000
                                                                                                                                                          331
                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                           271
                                                                                                                                                                                                                                                                                                                           211
                                                                                                                                                                                                                                                                                                                                                                                                          151
```

```
APPLICANT: WOOD, William I.

FITTLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME

FILE REFERENCE: P3530P1C49

CURRENT APPLICATION NUMBER: US/10/219,475

CURRENT FILING DATE: 2002-08-13

PRIOR APPLICATION NUMBER: 1,0119,480

PRIOR APPLICATION NUMBER: 60/059113

PRIOR FILING DATE: 1997-09-17

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/06349

PRIOR FILING DATE: 1997-10-17

PRIOR APPLICATION NUMBER: 60/06349

PRIOR APPLICATION NUMBER: 60/06349

PRIOR APPLICATION NUMBER: 60/064103

PRIOR APPLICATION NUMBER: 60/064103
                             RESULT 11
US-10-219-480-71
; Sequence 71,
                                                                                                                                                      Ś
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-24 (1-110) x US-10-219-475-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-219-475-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                332
                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152
                                                                                                                                                                                                                                                                                                                                                                                                                 212
                                                                                                                                                                                                                                                                                                                                    61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AsnValLysGySGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                           18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 TyrThrileSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                   TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                      GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                         AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTCCCCGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
  Application US/10219480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.56e-81
590.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                   391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40
```

```
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P353091C38
CURRENT APPLICATION NUMBER: US/10/219,480
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
밁
                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Publication No. US20030187209A1
; GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
; APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
; APPLICANT: Goddwski, Paul J.
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christo
; APPLICANT: Gurney, Austin L.
                                                                                                     밁
                                                                                                                                          Ś
                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-24 (1-110) x US-10-219-480-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-219-480-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR PRIOR PRIOR TITING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Homo Sapien
                                                                                             212 AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                               152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                       61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                          41 AsnValLysGysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla
                                                                                                                                                                                                                            21 TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                    92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                 1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul J
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.56e-81
590.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                             80
                                                                                                                                               60
```

81 TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100

```
TITLE OF INVENTION: SCREETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: SCREETED AND THE SAME
FILE REFERENCE: P3530PIC43
CURRENT APPLICATION NUMBER: US/10/219,483
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064973
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
                                                                  Ş
                                                                                                                   В
                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                US-10-019-455A-24 (1-110) x US-10-219-483-71 (1-521)
                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
APPLICANT: Grimaldi, J. Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 71, Application US/10219483 Publication No. US20030187210A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                              21 TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                           92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                             1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                              1.56e-81
590.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                              521
110
0
                                                                                                                                                               20
                                                                                                              151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    391
            Query Match:
DB:
                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE: P3530FLC29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR PRILING DATE: 1997-10-17
PRIOR PRILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR PRILING DATE: 1997-10-21
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                      Score:
                                                                                                                                   Pred. No.:
                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                           US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker,
APPLICANT: Desnoye
APPLICANT: Gerrick
APPLICANT: Goddarr
APPLICANT: Godowsh
APPLICANT: Gorimalo
APPLICANT: Gurney,
APPLICANT: Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 71, Application US/10219525 Publication No. US20030187211A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                       SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                              Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                       LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            272 GGAGAATTTTGGGCTGGCAGTGTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392 CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kevin
1.56e-81
590.00
100.00%
100.00%
100.00%
                                                                                                    Length:
Matches:
                         Mismatches:
Indels:
                                                                          Conservative:
```

40

211

ω 9

80

271

20

```
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SCCRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PLC41
CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
PRIOR FILING DATE: 2002-08-13
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-00-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06403
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION PRIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-24 (1-110) x US-10-219-525-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 71, Application US/140
Publication No. US20030187212A1
GENERAL INFORMATION:
                       Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392 CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212 AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 AsnValLysGySGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10219526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                      CURRENT APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo Sapien 
US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-24 (1-110) x US-10-219-526-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 71, Application US/10219530 Publication No. US20030187213A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C54
             APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41 AsnValLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 TyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MACGITAMAMAMGGGCAGCAGATCTATGTGTACTCAMAGCTGGTAMAMGAMAMTGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.56e-81
590.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0000
```

밁 Ş В S В Ś 밁 ঠ

```
Search completed: December 30, 2003, 02:01:04 Job time : 248.807 secs
                                                                                           Ş
                                                                                                                          В
                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; PRIOR FILING DATE: 1998-03-25
; PRIOR APPLICATION NUMBER: 60/079656
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR FILING DATE: 1998-03-27
; Remaining Prior Application data removed - See File Wrapper or PALM.; NUMBER OF SEQ ID NOS: 246
; SEQ ID NO 71
; SEQ ID NO 71
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-530-71
                                                                                                                                                                                 밁
                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-24 (1-110) x US-10-219-530-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
Pred. No.:
                                                          392 cccaccacgararrgacrrcrrcrgcgag 421
                                                                             101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                               332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                           272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                     81 TyrPheProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluVal 100
                                                                                                                                                                                              61 GlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGly 80
                                                                                                                                                                                                                                                                                                                                                               92 CATGGAATATTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                1 HisGlyIlePheMetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.56e-81
590.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      521
110
```

a

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -Q=/CgH2_1/USPTO_Spool/USI019455/runat 29122003_160348_277/app_query.fasta_1.1770
-DB=15sued_Patents_NA -QFMM=fastap_-SUFFIX=rii -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=biosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER-US10019455_@CGN 1 1 142 @runat 29122003 160348_277 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG_SCORES=0 -MAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Command line parameters:
-MODEL=frame+_p2n.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                           160.5
86.5
86.5
85.5
                                                                                                                                                             210
                                                                                                                                                                                                   253.5
253.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             p2n.model -DEV=xlh
                                                                                                                                                                                                                                                           Match
       43.0
43.0
39.2
35.7
31.5
27.2
14.7
14.7
14.7
13.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  569978 seqs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   December 29, 2003, 16:24:24; Search time 34.972 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HGIFMDRLASKKLCADDECV......RVYQEATKEVPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                        /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6A_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                           Length DB
                                           459
581
305
596
3565
3565
2757
2757
2757
2757
US-08-578-649-1

US-08-578-649-4

US-08-578-649-8

US-08-578-649-24

US-08-578-649-24

US-08-578-649-3

US-08-306-6918-48

PCT-US93-06251-79

US-09-300-958A-30

US-07-646-5378-1

US-09-356-952-11
                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (without alignments)
1388.315 Million cell updates/sec
                                             Sequence 18, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 8, Appli
Sequence 24, Appli
Sequence 24, Appli
Sequence 48, Appli
Sequence 79, Appl
Sequence 79, Appli
                                                                                                                                                                                                                                                   Description
               Sequence
Sequence
                                 App1
```

AL I GNMENTS

RESULT 1

ი

```
US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 18, Application US/08578649
Patent No. 5770366
APPLICATION NUMBER: DE P 43 2-
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEPAX: (212) 638-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                             SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 incl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                COMPUTER: IBM PS/
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                            10022
                                                                                                                                                                                                                                                                                                                                                                                                                                    New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                             E: 3.5 in IBM PS/2
                                                                                                                                                                                                                                                                                                                                              inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                             PC-DOS
                                                                                                                                                                DE P 43 24 247.2
                                                              BOER 1035-PFF/ALT
```

```
US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                          RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-24 (1-110) x US-08-578-649-18 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-578-649-18
                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08578649 Patent No. 5770366 GENERAL INFORMATION:
                                                                                                                                                                                      APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-D
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
                                        MEDIUM TYPE: 3.5 inch 1.44 Mb storage COMPUTER: IBM PS/2
                                                                                                                                            STREET: 805 Th
CITY: New York
                                                                                                            COUNTRY:
                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: 4..6
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc_RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                       304 GACAAATGGGATTTCTACTGCCAG 327
                                                                                                                                                                                                                                                                                                                                                                                                                   103 ThraspileaspphePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                 244 CCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133 GGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCCGCTCTTC 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64 TrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyVal---ValGlyTyrphe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73 ATGGCTGTGGCCCTTCAGGACTACATGGCCCCGACTGCCGATTCCTGACCATTCACCGG 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13 ATGCCAAAATTAGCAGATCGTAAATTATGTGCAGATCAGGAGTGCAGCCACCCTATCTCC 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25 LeualaSeralaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 MetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysValTyrThrIleSer
                                                                                                 10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluValProThr 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAlaGlyGlu---Phe 63
                                                                                                                             New York
                                                                                                                                                           E: Felfe & Lynch
805 Third Avenue
                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mat_peptide 7..327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.55e-28
253.50
64.81%
45.37%
42.97%
                              PC-DOS
                                                                                                                                                                                                                         MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /function= "Startcodon Met"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330
21
33
33
```

```
US-08-578-649-4
                                                                                                                                          RESULT 3
                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-24 (1-110) x US-08-578-649-1 (1-459)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91000
                   Sequence 4, Application US/08578649
Patent No. 5770366
GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (212) 688-921
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/5
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                                        409 GACAAATGGGATTTCTACTGCCAG 432
                                                                                                                                                                                                           103 ThraspileaspphepheCysGlu 110
                                                                                                                                                                                                                                                                                                                   289 TGGGGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGCTATTTC 348
                                                                                                                                                                                                                                                                                                                                                                                             238 GGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    178 ATGGCTGTGGCCCTTCAGGACTÁCATGGCCCCGACTGCCGATTCCTGACCATTCACCGG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           118 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCACCCTATCTCC 177
                                                                                                                                                                                                                                                                            83 ProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluValProThr 102
                                                                                                                                                                                                                                                                                                                                                 64 TrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyVal---ValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                      45 GlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAlaGlyGlu---Phe 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 LeuhlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 MetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysValTyrThrIleSer 24
                                                                                                                                                                                                                                          CCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACA 408
Ulrich Bogdan
Reinhard Buttner
Brigitte Kaluza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        459 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64.81%
45.37%
42.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.5e-28
253.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DE P 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                             288
```

```
밁
                                                                   Ş
                                                                                                      В
                                                                                                                                  Ş
                                                                                                                                                                     밁
                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                            US-10-019-455A-24 (1-110) x US-08-578-649-4 (1-581)
                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-578-649-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (212) 838-3884 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                             NO. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 581 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P
FILLING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 29-July-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                               356 TGGGGAĞĞĞAĞTĞTTCAGĞĞAGGTTACTATGGAGACCTGGCAGCCCGCCTGĞĞCTATTTC 415
                                                                                              305 GGCCAAGTGGTGTATGTCTCTCCAAGTTG-----AAGGGCCGTGGGCGCCTTTTC 355
                                                                                                                                                           185 ATGCCCAAGCTGGCTGACTGGAAGCTGTGTGCGGACGAGGAATGCAGCCATCCTATCTCC 244
83 ProArgAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluValProThr 102
                                                             64 TrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyVal---ValGlyTyrphe 82
                                                                                                                            45 GlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAlaGlyGlu---phe 63
                                                                                                                                                                                    25 LeuAļaSerAļaGlnGluAspTyrAsnAlaProAspCysArgPhelleAsnValLysLys 44
                                                                                                                                                                                                                                                   5 MetAspArgLeuAlaSerLysLysLeuCysAlaAspAspGluCysValTyrThrIleSer 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Felfe & Lynch
805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mat_peptide
179..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-July-1994
                                                                                                                                                                                                                                                                                                                                           6.19e-25
231.50
62.96%
43.52%
39.24%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DE P 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24 247
                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                          581
47
21
밁
                          Ś
                                                             밁
                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
```

```
US-10-019-455A-24 (1-110) x US-08-578-649-8 (1-305)
                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                     US-08-578-649-8
                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8, Application Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (212) 838-38 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 305 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc RNA
LOCATION: join(1..29, 277..305)
OTHER INFORMATION: /function= "Primer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (212) 838-3884
TELEPHONE: (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: 3.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
67 TACATGGCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTC 126
                                 32 TyrAsnAlaProAspCysArgPhelleAsnValLysLysGlyGlnGlnIleTyrValTyr 51
                                                                                                        12 LysLeuCysAlaAspAspGluCysValTyrThrileSerLeuAlaSerAlaGlnGluAsp 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 103 ThraspileaspphePheCysGlu 110
                                                                      7 AAGTTTTCGGCGGATCAGGAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCTTCAGGAC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  476 GATCAATGGGATTTCTACTGCCAG 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08578649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-July-1994
                                                                                                                                                                                                       61.62%
44.44%
35.68%
                                                                                                                                                                                                                                                         3.04e-22
210.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DE P 43 24 247.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                        Conservative:
```

```
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEPAX: (212) 688-9200
TELEPAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 24:
SEQUENCE CHARACTERISTICS:
LENGIH: 596 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPDTICTY: 11 near
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 24, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                             FEATURE:
                                                                                                                                                 FEATURE:
                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: DE P 43 24 FILING DATE: 20-July-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                              NAME/KEY:
LOCATION:
                                                                                                                                                                NAME/KEY:
LOCATION:
                                                                                                                                                                                                                    LOCATION:
                      NAME/KEY:
                                                       LOCATION:
                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-
SOFTWARE: Wordperfect
LOCATION:
                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        238 GACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACAGATAAATGGGATTTCTAC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71 AspGlyGln---AspGluMetGlyValValGlyTyrPheProArgAsnLeuValLysGlu 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52 SerLysLeuValLysGluAsnGlyAlaGlyGlu---PheTrpAlaGlySerValTyrGly 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90 GlnArgValTyrGlnGluAlaThrLysGluValProThrThrAspIleAspPhePhe 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T: 805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTGGGGAGGCAGCGTTCAGGGA 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATTACTATGGAGATCTGGTCGCTCGCCTGGGCTATTTCCCCCAGTAGCATTGTCCGAGAG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ulrich Bogdan
Reinhard Buttner
Brigitte Kaluza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
   393..503
                    exon
                                                                                                                                                                                                                                                        CDS
                                                                          exon
                                                                                                                             exon
                                                                                                                                                                sig_peptide
                                                                                                                                                                                                                    join(40..111, 40..166, 214..347, 393..503, 549 ...569)
                                                       214..347
                                                                                                            40..166
                                                                                                                                                                                                                                                                                linear
: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            31,575
SER: BOER 1035-PFF/ALT
```

```
ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                               US-08-578-649-3
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-24 (1-110) x US-08-578-649-24 (1-596)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-578-649-24
                                                                                                                                                                                                                             Sequence 3, Application US/08578649
Patent No. 5770366
GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOWA-INHIBITING PROTEIN
                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 incl
COMPUTER: IBM PS/2
                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
STREET: 805 Third Avenue
                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
                                                                                                   COUNTRY:
                                                                                                                                         CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: one-of(194, 369, 527)
OTHER INFORMATION: /note= "N in positions 194, 369
OTHER INFORMATION: and 527 denotes an indefinite number and sequence
OTHER INFORMATION: of nucleotides "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                525 CANTITCCCCTTTCTCTTTTCAGAAATGGGATTTCTACTGCCAG 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         468 ACCCTGAAACCTGGCAAAGTCGATGTG---AAGACAGACGTGGAGTGTCATGGGGGGCTGG 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        408 TATGGAGATCTGGCTGCTCGCCTGGGCTATTTCCCCAGTAGCATTGTCCGGAGAGGACCAG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   348 GTGGGTCTTGGGAGAGTGAAANAGCTTTTAACTCCTCTTCCCCAGGTTCAGGGAGATTAC 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                297 TATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTGGGGAGGCAGC 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             237 CTTCAGGACTACATGGCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTG 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177 GGAGGGTAGAATTGGGNCCCTTCTATTCCTTCCCTAGACCCTATCTCCATGGCTGTGGCC 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCG-TAAGAATGG 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92 ValTyrGlnGluAlaThrLysGluValProThrThrAspIle-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73 GlnAspGluMetGlyVal---ValGlyTyrPheProArgAsnLeuValLysGluGlnArg 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49 TyrvalTyrSerLysLeuValLysGluAsnGlyAlaGlyGlu---PheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29 GlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIle 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22 ----ThrileSerLeuAlaSerAla 28
                                                                                   10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New York
                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   549..569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.31e-18
186.00
45.81%
32.26%
31.53%
                                                                                                                                                                                                                     24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----AspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---- 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
```

```
US-10-019-455A-24 (1-110) x US-08-578-649-3 (1-3565)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 3565 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: DE P
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-ULLY-1994
                                                     1636 CGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG----- 1686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Wordperfect
                                                                                                                                   1576 CCTTCCCTAGACCCTÁTCTCCATGGCTGTGGCCCTTCAGGACTÁCATGGCCCCGÁCTGC
                                                                                                                                                                                                                                                                                              1456 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCGTAAGAATGGG 1515
                                                                                                                                                                                                                1516 GAGGGGTAGAATTGGGCTTGGGTGTTAGCCTGTGGGATGTGCATTCCCCCTTCTATT 1575
58 AsnGlyAlaGlyGlu---PheTrpAlaGlyServal 68
                                                                                                                                                                                                                                                                                                                           ArgPheIleAsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGlu 57
                                                                                                                                                                        -----ValTyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCys 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    one-of (2216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
3232..3252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2804..2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
1378..1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sig_peptide
1378..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1586..1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                          2.57e-13
160.50
50.00%
39.13%
27.20%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleotides"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "N in position 2216 denotes an indefinite number ans sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DE P 43 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
Conservative:
                                                                                                                                                                                                                                                           ----- 19
                                                                                                                                   1635
            문
                                               Ś
                                                                                        밁
                                                                                                                           Ś
                                                                                                                                                                    뮍
                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                    US-10-019-455A-24 (1-110) x US-08-306-691B-48 (1-2757)
                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-306-691B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-306-691B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 5734039
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 48, Application US/08306691B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (215) 568-8383
TELEFAX: (215) 568-5549
TELEX: NO. 5734039e
INFORMATION FOR SEQ ID NO: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 2757 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: MONACO, Daniel A.
REGISTRATION NUMBER: 30,480
REFERENCE/DOCKET NUMBER: 83:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/306,691B
FILING DATE: September 15, 1994
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Calabretta, Bruno
APPLICANT: Skorski, Tomasz
ATTITLE OF INVENTION: ANTISENSE
TITLE OF INVENTION: OLIGONUCLECTIDES TARGETING COOPERATING ONCOGENES
NUMBER OF SEQUENCES: 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Seidel, Gonda, Lavorgna & Monaco, P.C. STREET: Two Penn Center, Suite 1800 CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: Pennsylvania
2472 TACGTGGAGGAAGAT----TATTCTGAA 2495
                                                                                                                                                    2385 GACATCATC------AÄĞATCCTTAACAAGAAGĞĞACAGCAAGGCTGGTĞĞCGA 2432
                                                                                                                                                                                                                                  2325 GCCAAAGCCCGCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAGGAGGGT 2384
                              86 LeuValLysGluGlnArgValTyrGlnGlu 95
                                                                                                             66 GİYSerValTYrGİYAspGİYGİnAspGİuMetGİYValValĞİYTYrPheProArgAsn 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1687 AAGGGCCGTGGGCGCTCTTCTGGGGAGGCAGCGTG 1722
                                                                                                                                                                                       46 GlnGlnIleTyrValTyrSerlysLeuValLysGluAsnGlyAlaGlyGluPheTrpAla 65
                                                                                                                                                                                                                                                                     26 AlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 45
                                                                                GGGGAGATCTATGGCCGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Diskette, 3.50 inch, 720 Kb
                                                                                                                                                                                                                                                                                                                                                                                  86.50
51.43%
32.86%
14.66%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.0146
                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                          GTTGGCTGGTTCCCTGCCAAC 2471
```

밁

밁 Ş Ъ Ś 뭥 Ş

19 ---

Query Match:

Best Local Similarity: Percent Similarity:

US-08-578-649-3 Alignment Scores:

OTHER INFORMATION: OTHER INFORMATION:

FEATURE: FEATURE:
NAME/KEY:

LOCATION:

NAME/KEY:

FEATURE:

FEATURE:

NAME/KEY: LOCATION:

FEATURE: MOLECULE TYPE:

STRANDEDNESS:

nucleic acid

FEATURE

LOCATION: NAME/KEY: LOCATION: NAME/KEY:

exon

NAME/KEY:

exon

LOCATION:

```
RESULT 9
US-09-300-958A-30
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                            ₽,
                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-24 (1-110) x PCT-US93-06251-79 (1-2757)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US93-06251-79
; Sequence 79, Application PC/TUS9306251
; GENERAL INFORMATION:
                    Sequence 30, Application US/09300958A Patent No. 6495319 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO: 79:
SEQUENCE CHARACTERISTICS:
LENGTH: 2757 base pairs
TYPE: nucleic acid
    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Wickstrom, Eric and Rife, Jason P.
TITLE OF INVENTION: Trivalent Synthesis of Oligonucleotides Containing
TITLE OF INVENTION: Stereospecific Alkylphosphonates and Arylphosphonates
NUMBER OF SEQUENCES: 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: 516-742-4343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 400 City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: DiGiglio, Frank S.
REGISTRATION NUMBER: 31,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 19930 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                  2472 TACGTGGAGGAAGAT----TATTCTGAA 2495
                                                                                                                                                                                                                                                                                2385 GACATCÁTC------ÄÁGATCCTTAACAAGAAGGGÁCAGCAAGGCTGGTGGCGA 2432
                                                                                                                                                                                                              2433 GGGGAGATCTATGGCCGG-----
                                                                                                                                                                                                                                                                                                                                                             2325 GCCAAAGCCCCCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAGGAGGGT 2384
                                                                                                                                                                                                                                          66 GlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGlyTyrPheProArgAsp 85
                                                                                                                                                                      86 LeuValLysGluGlnArgValTyrGlnGlu 95
                                                                                                                                                                                                                                                                                                                      46 GlnGlnileTyrValTyrSeriysLeuValLysGluAsnGlyAlaGlyGluPheTrpAla 65
                                                                                                                                                                                                                                                                                                                                                                                                 26 AlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11530
McClelland, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: SCULLY, SCOTT, MURPHY & PRESSER 400 Garden City Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19930630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.0146
86.50
51.43%
32.86%
14.66%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31,346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCT/US93/06251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                        GTTGGCTGGTTCCCTGCCAAC 2471
```

```
RESULT 10
US-07-646-537B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-24 (1-110) x US-09-300-958A-30 (1-4762)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: P-PH 3457
CURRENT APPLICATION NUMBER: US/09/300,958A
CURRENT FILING DATE: 1999-04-27
PRIOR APPLICATION NUMBER: 60/083,331
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/098,070
PRIOR APPLICATION NUMBER: 60/118,624
PRIOR APPLICATION NUMBER: 60/118,624
PRIOR FILING DATE: 1999-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-300-958A-30
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/07646537B Patent No. 5348864 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Welsh, John
APPLICANT: Trenkle, Thomas
TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods of
TITLE OF INVENTION: Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 85
SOFTWARE: PatentIn Ver.
                                                                              ZIP: 08543-4000
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Homo sapiens
                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                     CLASSIFICATION: 435
                                                         FILING DATE:
                                                                            APPLICATION NUMBER: US/07/646,537B
                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                  STATE:
                                                                                                                                                                                                                                                                                 CITY: Princeton
                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2465 TTGAAAGGAGATGTGGTGAAGATTTACACAAAGATG------AGTGCAAATGGC 2512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2405 CTGGGCATTGCCATCGCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTG 2464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2513 TGGTGGAGAGGAGGAAGTAAATGGCAGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2552 CCATCCACATATGTGGAAGAG 2572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83 ProArgAsnLeuValLysGlu 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAlaGlyGlu 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 IleSerLeuAļaSerAļaGlnGluAspTyrAsnAļaProAspCysArgPheIleAsnVal 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4762
Gaul, Timothy J.
                                                                                                                                                                                                                                       New Jersey
1: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheTrpAlaGlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                   P.O. Box 4000
                                                                                                                                                                                                                                                                                                                                                                                              Barbacid, Mariano
                                                                                                                                                                                                                                                                                                                      Bristol-Myers Squibb Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.0323
86.50
52.24%
31.34%
14.66%
                                                                                                                                                                                                                                                                                                                                                                            Vav Proto-Oncogene Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GIGGCIGGITT 2551
```

```
US-09-300-958A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-24 (1-110) x US-07-646-537B-1 (1-2793)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-07-646-537B-1
                                                                                                                                                                                                                                                                                            SEQ ID NO 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 28, Application US/09300958A Patent No. 6495319
                                                                                                                                                                                                                                                                                                                                            APPLICANT: Trenkle, Thomas
TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods of
TITLE OF INVENTION: Using Same
FILE REFERENCE: P-PH 3457
CURRENT APPLICATION NUMBER: US/09/300,958A
CURRENT FILING DATE: 1999-04-27
PRIOR APPLICATION NUMBER: 60/083,331
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/098,070
PRIOR APPLICATION NUMBER: 60/098,070
PRIOR FILING DATE: 1998-08-27
PRIOR APPLICATION NUMBER: 60/118,624
PRIOR FILING DATE: 1999-02-04
NUMBER: 05 ED ID NOS: 85
COFTENDER: DETOSITE SET OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC OF SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                           SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: McClelland, Michael APPLICANT: Welsh, John APPLICANT: Trenkle, Thomas
                                                                                  NAME/KEY: unsure
LOCATION: (428)
                                                                                                                                                          LENGTH: 467
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (609) 921-5901
TELEFAX: (609) 921-4526
INFORMATION FOR SEQ ID NO: 1:
                                                      NAME/KEY: unsure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 2793 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 33,111
REFERENCE/DOCKET NUMBER: DC10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 921-5901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2516 TATGTGGAGGAAGAC----TATTCCGAA 2539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2477 GGGGAGATCTACGGCCGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2429 GATATCATC-----AAGATCCTCAATAAGAAGGGACAGCAAGGCTGGTGGCGT 2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2369 GCCAAAGCCCGCTACGACTTCTGTGCCCGGGACAGGTCGGAACTGTCCCTTAAGGAGGGT 2428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66 GlySerValTyrGlyAspGlyGlnAspGluMetGlyValValGlyTyrPheProArgAsn 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86 LeuValLysGluGlnArgValTyrGlnGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46 GlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAlaGlyGluPheTrpAla 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 AlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 45
                                                                                                                                                                                                                                                                                                                    PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14..2545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.0209
85.50
51.43%
31.43%
14.49%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
                           Ś
                                                                                                밁
                                                                                                                                                          Ś
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      皮
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-300-958A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11, Applicate Patent No. 6117663 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (462)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ.
43 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValLysGluAsnGlyAlaGlyGlu 62
```

В Ś 밁 Ş В Ś

```
APPLICANT: Boriack-Sjodin, Ann
APPLICANT: Margarit, S. M.
APPLICANT: Margarit, S. M.
APPLICANT: Bor-Sogi, Dafina
APPLICANT: Cole, Philip
APPLICANT: Cole, Philip
APPLICANT: Kuriyan, John
TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF L
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 600-1-228N
CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT FILING DATE: 1999-07-19
LEARLIER APPLICATION NUMBER: 60/093,631
LUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                               US-10-019-455A-24 (1-110) x US-09-356-952-11 (1-5398)
                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LENGTH: 5398
; TYPE: DNA
; ORGANISM: Saccharomyces cerevisiae
US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-24 (1-110) x US-09-300-958A-28 (1-467)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 11
505 GCTGCTTATGACTTTAATTATCCCATTAAAAAAAGACAGTTCTTCGCAACTTTTGTCTGTA
                                                                                             445 CTTTCTTCTTCCCCCCCCGACAAGTGAGTTGACCAGCATTCGTCCAATTGGAATAGTAGTC 504
                                            28 AlaGlnGluAspTyrAsnAlaPro------AspCysArgPheIleAsnVal 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299 ---GGAAGGATGAATAAATTCAAATCCCGTGTTGCACCCTGCACCAAAATT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              152 GCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTGTTGAAAGGAGATGTG 211
                                                                                                                                      8 LeuAlaSerLysLysLeuCysAlaAspAspGluCysValTyrThrileSerLeuAlaSer 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260 GTAAATGGCAGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212 GTGAAGATTTACACAAAGATG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88 LysGluGlnArgValTyrGlnGluAlaThrLysGluValProThrThrAspile 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68 ValTyrGlyAspGlyGlnAspGluMetGlyValValGlyTyrPheProArgAsnLeuVal 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48 IleTyrValTyrSerLysLeuValLysGluAsnGlyAlaGlyGluPheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28 AlaGinGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGinGin 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09356952
                                                                                                                                                                                                                                                                        0.587
78.50
49.44%
25.84%
13.31%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79.00
50.00%
29.49%
13.39%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.0142
                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----GTGGGCTGGTTTCCATCCACATATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --AGTGCAAATGGCTGGTGGAGAGGAGAA 259
```

PHOTTPALAGIYSERVITY/TOLYARDINAMOTIVACCANOCITGTT] 666 PROATGARGATGATTAGTTATTCACCACACTAATGAGAAGTTAACAGAGCTGTT] 666 PROATGARGATICATTAGTAGACCTTTAAGA 693 CCTCAAAACTTCCGTAGACCTTTAAGA 693 CCTCAAACTTCAAACTTCCGTAGACCTTTAAGA 693 CCTCAAAACTTCCGTAGACCTTTAAGA CTTTAAGA 693 CCTCAAAACTTCCGTAGACCTTTAAGACTTTAAGACTTTAAGACCTTTAAGACCTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTTAAGACTTAA
--

NAME/KEY: misc feature
LOCATION: (779676)..(779676)
OTHER INFORMATION: n equals a, t,
NAME/KEY: misc feature
LOCATION: (85539).. (855539)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature
LOCATION: (871619)..(871619) NAME/KEY: misc feature
LOCATION: (559241) . (559241)
OTHER INFORMATION: n equals a, t,
NAME/KEY: misc feature
LOCATION: (600992) . (600992)
OTHER INFORMATION: n equals a, t,
NAME/KEY: misc feature
LOCATION: (622708) . (622708)
OTHER INFORMATION: n equals a, t,
NAME/KEY: misc feature
LOCATION: (622708) . (622708)
OTHER INFORMATION: n equals a, t, NAME/KEY: misc feature LOCATION: (319226) . (319226) OTHER INFORMATION: n equals a, t NAME/KEY: misc feature LOCATION: (559167) . (559167) OTHER INFORMATION: n equals a, t NAME/KEY: misc feature
LOCATION: (657203)...(657203)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature
LOCATION: (674435)...(674435)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature
LOCATION: (682442)...(682442)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature
LOCATION: (713652)...(713652)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature
LOCATION: (713652)...(713652)
OTHER INFORMATION: n equals a, t,
NAME/KEY: misc feature NAME/KEY: misc feature
LOCATION: (234814). (234814)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature
LOCATION: (309398)...(309398)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature
LOCATION: (309418)...(309418)
OTHER INFORMATION: n equals a, t
NAME/KEY: misc feature OTHER INFORMATION: n equals a, t NAME/KEY: misc feature LOCATION: (191995)..(191995) OTHER INFORMATION: n equals a, t NAME/KEY: misc feature LOCATION: (231980)..(231980) OTHER INFORMATION: n equals a, t NAME/KEY: (231980)...(231980) NAME/KEY: misc feature LOCATION: (779455). (779455) DTHER INFORMATION: n equals a, VAME/KEY: misc feature JOCATION: (741684)...(741684) DITHER INFORMATION: n equals a, NAME/KEY: misc feature LOCATION: (657081)..(657081) OTHER INFORMATION: n equals a, NAME/KEY: misc feature LOCATION: (312993)..(312993) OTHER INFORMATION: n equals a, NAME/KEY: misc feature LOCATION: (312837)..(312837) OTHER INFORMATION: n equals a, THER INFORMATION: n equals a, NAME/KEY: misc feature LOCATION: (234220)..(234220) OTHER INFORMATION: n equals NAME/KEY: misc_feature LOCATION: (234187)..(234187) OTHER INFORMATION: n equals a, a, ŗ ζ, ŗ <u>ښ</u> ζ, ŗ ζ, Ç , ... ,, ŗ ŗ <u>`</u>t ŗ ŗ ū ŗ ŗ Ĺ ç ņ 'n ņ 'n ņ ņ ņ Ç ú ņ ņ Ó ú ņ 'n ó ņ ú 'n ņ Ó ç õ õ or g 유 õ ç ဝူ 8 မှ e R or g or g ဝူ ö õ ဝူ õ 유 or ç õ õ ıΩ ω ω g ω

ŗ

ņ

or g

```
Ş
                                                                        밁
                                                                                                                                   B
                                                                                                                                                                Ś
                                                                                                                                                                                                ႘
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                  US-10-019-455A-24 (1-110) x US-08-916-421B-1 (1-1664976)
                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-916-421B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc feature
LOCATION: (1664854)..(1664855)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc feature LOCATION: (1637998)..(1637998) OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc feature LOCATION: (1603734)...(1603734) OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc feature
LOCATION: (1349491)..(1349491)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (1470091)..(1470091)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
LOCATION: (1119881)..(1119881)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (1569020)..(1569020)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature
LOCATION: (1349473)...(1349473)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
LOCATION: (1313224)..(1313224)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: n equals a, NAME/KEY: misc_feature LOCATION: (1096846)..(1096846) OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
LOCATION: (1602912)..(1602912)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: n equals a, NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc_feature
LOCATION: (1084830)..(1084830)
      415161 GAGTTA---TTTGGAGGCTAT---
                                                                  415113 GCAAATGAGGATGGATTAAAGGTTGTT------
                                                                                                                                                                                   415008 GAAGAGGÁÓTATGAGGAGTÁTGTGTTTAAGGTAGĆTAAGGĆAATAGATGAAGTTGAT--- 415064
                                                                                                                                                                                                                                                 414948 ATCTATGCTGAAAGATTGGCTAAAGATTTAAATTTAAAGCTAAGGAAGAAGATTATTTCA 415007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION: n equals a,
                                                                                       55 ValLysGluAsnGlyAlaGlyGluPheTrpAlaGlySerValTyrGlyAspGlyGlnAsp 74
                                                                                                                                                35 ProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeu 54
                                                                                                                                                                                                                  16 AspAspGluCys----ValTyrThrIleSerLeuAlaSerAlaGlnGluAspTyrAsnAla 34
                                                                                                                                                                                                                                                                              GluMetGlyValValGlYTYrPheProArgAsnLeuValLysGluGlnArgValTyrGln 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1310988)..(1310988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1130881) .. (1130881)
                                                                                                                       ---TTAATGAAGATTGGAGTTGGAATCCCTATCTATGTAGCTTCAGAGATG 415112
                                                                                                                                                                                                                                                                                                                                                                    46.67%
25.71%
12.12%
                                                                                                                                                                                                                                                                                                                                                                                                                 2.58e+04
71.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                ength:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               о
г
с
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             o
F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ιΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
--GCAAGGCATGAGAGAATTTATAGG 415202
                                                           ---CTATCTGGGCAAGGAGCTGAT 415160
                                                                                                                                                                                                                                                                                                                                                 1664976
27
22
33
23
```

```
밁
                                                                          Ś
                                                                                                         8
                                                                                                                                 Ś
                                                                                                                                                     US-10-019-455A-24 (1-110) x US-09-134-078-57 (1-1992)
                                                                                                                                                                                                                                                                                                    ;
US-09-134-078-57
                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-134-078-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 858/677-1465
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 57, Application US/09134078 Patent No. 6368844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: SIR Diego
CITY: San Diego
TTATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Bylina, TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM:
SOFTWARE: FastSEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   415203 GAGAGAGGGGGAGGAG 415217
                                      1219 GGCATGGAGATCAAAAAGACCGTGGAAGTGAGGGCTGGTGTTTTCGACTACAGCAACACG 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                            1159 CTGTTCAACACAGGTGAÁGÁCATAAGAGAAGACACCTGCTCTTTCÁTCCTTCCAAAÁGAC 1218
                                                                         45 GlyGlnGlnIle-----
                                                                                                                      25 LeuAlaSerAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95 GluAlaThrLysGlu 99
                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4365 Executive Drive, Suite 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                       858/677-1456
858/677-1465
                                                                                                                                                                                                                                                                                                                            Coding Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM Compatible
SYSTEM: Windows95
                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gray Cary Ware & Freidenrich LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diskette
                                                                                                                                                                                                                                                                                                                                                         Genomic DNA
                                                                                                                                                                                                                                                                                                                                                                                 double
                                                                                                                                                                                                2.09
70.50
37.93%
27.59%
11.95%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Edward J.
GLYCOSIDASE ENZYMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/09/134,078
                                                                                                                                                                                                                                                                                                                                                                                                                                           57:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09010/024002
                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                          Conservative:
---LeuValLysGluAsnGlyAlaGlyGluPhe 63
                                                                -----TyrValTyrSerLya--- 53
```

```
Ş
                          US-10-019-455A-24 (1-110) x US-09-134-078-11 (1-2043)
                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                  Query Match:
                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                      US-09-134-078-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
US-09-134-078-11
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11, Application US/09134078
Patent No. 6368844
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
PRIOR APPLICATION DATA;
APPLICATION NUMBER: 08/949,026
FILING DATE: 10-OCT-1997
APPLICATION NUMBER: 60/056,916
FILING DATE: 06-DEC-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 090
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ for Wir
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09
FILING DATE: 13-AUG-1998
                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
COMPUTER: IBM Compat
COMPUTER: WI
COPPUTER SYSTEM: WI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Bylina, Edward J.
TITLE OF INVENTION: GLYCOSIDASE ENZYMES
                                                                                                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: C
                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1396 GAAATGITCCTTGAAGGCCACTTTCAGGGAAAAACGGTGAAAGACTCTATCAAAGCGAAA 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1339 GGATACGGA---ATTTACGGCTTTGATCTCGACACACCCGGATCCCGGATGGAGAACAT 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1456 GTGGTGAACGAAGCA---CGGTACGTGCTCGCAGAGGAAGTTGATTTT 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1279 TTTGAAAAGTTGTCTGTCAAAGTCGAAGATCTGGTTTTTGAAAATGAGATAGAGCATCTC 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 ValTyrGlnGluAlaThrLysGluValProThrThrAspIleAspPhe 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          75 GlumetGlyValValGlyTyrPheProArgAsnLeuValLysGluGln------Arg 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64 TrpAlaGlySerValTyrGly-------AspGlyGlnAsp 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Gray Cary Ware & Freidenrich LLP 4365 Executive Drive, Suite 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                    Coding Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IBM Compatible
SYSTEM: Windows95
                                                                                                                                                                                                                                                                                                                                                                                                          858/677-1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Diskette
                                                                                                                                                                                                                                                                      Genomic DNA
                                                                             2.17
70.50
37.93%
27.59%
11.95%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/09/134,078
                                                                                                                                                                                                                                                                                                                                                                        11:
                                                                                                                                                                                                                                                                                                                                                                                                                                         09010/024002
                                                                                                                              Length:
Matches:
                                                                                               Mismatches:
                                                                                Indels:
                                                                                                                Conservative:
```

```
1447 GAAATGTTCCTTGAAGGCCACTTTCAGGGAAAAAACGGTGAAAGACTCTATCAAAGCGAAA 1506
1507 GTGGTGAACGAAGCA---CGGTACGTGCTCGCAGAGGAAGTTGATTTT 1551
                                                                                                                                                                                                                                                                                                    1390 GGATACGGA---ATTTACGGCTTTGATCTCGACACAACCCGGATCCCGGATGGAGAACAT 1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1330 TTTGAAAAGTTGTCTGTCAAAGTCGAAGATCTGGTTTTTGAAAAATGAGATAGAGCATCTC 1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1270 GGCATGGAGATCAAAAAGACCGTGGAAGTGAGGGCTGGTGTTTTCGACTACAGCAACACG 1329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1210 CTGTTCAACACAGGTGAAGACATAAGAGAGACACCTGCTCTTTCATCCTTCCAAAAGAC 1269
                                                            92 ValTyrGlnGluAlaThrLysGluValProThrThrAspIleAspPhe 107
                                                                                                                                                                                                                75 GluMetGlyValValGlyTyrPheProArgAsnLeuValLysGluGln------Arg 91
                                                                                                                                                                                                                                                                                                                                                                                54 -----LeuValLysGluAsnGlyAlaGlyGluPhe 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45 GlyGlnGlnIle----- 53
```

Search completed: December 29, 2003, 22:08:03 Job time: 213.972 secs

Ş B Ś В Ś 밁 Ş 밁 Ś B

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: 0 seq length: 2000000000
                                                                                                                        IDENTITY_NUC Gapop 10.0 , Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-25
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      December 29, 2003, 22:08:26 ; Search time 1045 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2888711 seqs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  catggtgtatttatggataa.....atattgacttcttctgtgaa 330
em_htg_hum:*
em_htg_inv:*
em_htg_other:*
em_htg_other:*
em_htg_pln:*
em_htg_rod:*
em_htg_vrt:*
em_htg_vrt:*
em_htg_vrt:*
em_htg_o_num:*
em_htgo_mus:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb ba: *
gb in: *
gb ow: *
gb ow: *
gb opa: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *
gb pat: *

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_pat:*
em_ph:*
em_pl:*
                                                                                                                                                                                                                                                                                                                                             em_un:*
em_vi:*
                                                                                                                                                                                                                                                                                                                                                                                              em_ro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em om: *
em ov: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_fun: *
em_hum: *
em_in: *
em_mu: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (without alignments)
12918.830 Million cell updates/sec
```

a

Pred. No. <u>د</u> the number of results predicted by chance to have

ACCESSION VERSION KEYWORDS SOURCE

BD010817.1 GI:18639190 JP 2001069994-A/18.

Novel polypeptide and DNA thereof. BD010817

330 bp

DNA

linear

PAT 31-JAN-2002

ALIGNMENTS

ORGANISM

ga anM

REFERENCE

TITLE AUTHORS

Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H. Novel polypeptide and DNA thereof

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 330)

RESULT 1 BD010817 LOCUS DEFINITION

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No. Score 100.0 24.8 20.4 19.7 19.7 19.7 19.7 18.2 18.2 18.2 Match 121151 215581 144765 Length DB 10 6 6 10 HSA252325 HS705D16 HSA252326 RNU67884) MMMIA A42945 AX016788 BT007044 0 AF243504 BD010821 BD093122 DMMU243939 AX253435 AX491252 AF233261 BD010802 BD093103 AX358818 BD093131 BD010816 AF233333 BD010836 BD093137 BD010835 BD093136 BD010830 BX510362 BD010805 BT007775 AX454774 AX362311 BD093117 ü BD010817 Novel pol BD093118 Novel pol BD093116 Novel pol BD01085 Novel pol BD010851 Novel pol AF243504 Mus muscu BD010821 Novel pol BD093122 Novel pol BD093127 Novel pol BD093137 Novel pol BD093137 Novel pol BD093137 Novel pol BD093136 Novel pol BD093131 Novel pol BD093131 Novel pol BD010836 Novel pol BD010830 Novel pol BD010830 Novel pol BD010830 Novel pol BD010830 Novel pol BD0108311 Novel pol BD010830 Novel pol BD010830 Novel pol BD093131 Novel pol BD093131 Novel pol BD093131 Novel pol BD093131 Novel pol BD093131 Novel pol BD093130 Novel pol BD093103 Novel pol BD093121 Novel pol AX454774 Sequence AX491252 Sequence AX491252 Sequence AX491252 Homo sapi BD010820 Novel pol AF233261 Homo sapi BD03121 Novel pol AF233518 Gallus ga BX510362 Mus muscu AF233519 Rant cate AC106161 Rattus no AJ252326 Homo sapi AL034428 Human DNA AL252326 Homo sapi AL034428 Human DNA A42945 Sequence 4 AX016788 Sequence A42942 Sequence BT007044 Homo sapi BT007775 Synthetic AX253435 Sequence X94322 M.musculus U67884 Rattus norv Description

0

10:20:42 2003

```
SOURCE
                                         KEYWORDS
              REFERENCE
                              ORGANISM
TITLE
```

VERSION KEYWORDS ACCESSION

BD010805.1 GI:18639178 BD010805.1 GI:18639178 JP 2001069994-A/6.

SOURCE

ORGANISM

REFERENCE

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus. Mammalia; 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases 1 to 384)
(bases

AUTHORS

COMMENT

Mus sp. (mouse) JP 2001069994-A/6

JOURNAL TITLE

```
CC CC Ke FT FT
                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                           ESULT 2
,D093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
es 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cent. JP 2001069994-A 18 21-MAR-2001;
KEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SHINICHI MOGI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P19/02, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61P19/08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus sp. (mouse)
JP 2001069994-A/18
JP 2001069994-A/2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 TATTTCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COTK14/47,CO7K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C12F21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                           301 CCAACCACGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Taractartrcccicioscaagagcacacadaagartacaatgccccagactgradgctcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source sm='Mus sp. (mouse)',
/organism='Mus sp. (mouse)',
/organism='Mus sp. (mouse)',
                                                                                                                                                                                                                                                     330 bp
Novel polypeptide and its DNA.
BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
/mol_type="genomic 10095"
/db_xref="taxon:10095"
/db_xref="taxon:92 a
                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Rodentia; Sciurognathi; Muridae; Murinae; Mus. Nammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 10 (bases 1 to Y. Nishi, K., Ogi, K., Okubo, S., Mogi, S., Noguchi, Y., Yoshimura, K., and Tanaka, H., Nishimura,                                                                                                                                                                                                                 BD093118.1 GI:22638706
WO 0102564-A/18.
NOVEL POLYPEDTIDE AND ITS DNA 2001; NOVEL POLYPEDTIDE AND 11-JAN-2001; PACENT: WO 0102564-A 18 11-JAN-200AKI ITO,KAZUNORI NISHI, KAZUHIRO PACENT: WO CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 330; DB 6; Length 330; 100.0%; Score No. 2.7e-90; 100.0%; Pred. No. 2.7e-90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87 t
                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD010805
LOCUS
DEFINITION
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 330; DB 6; Query Match 100.0%; pred. No. 2.7e-90; Query Matches 0; Mismatches 0; Matches 330; Conservative 0; Mismatches 330; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                뎡
                                                                                                                                                                                                                                                                                                                       ફ
                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                         Ś
                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OGI, SHULLING OGI, SHULLING OGI, SHULLING OGI, SHINICHI OS MUS 8P. 64-A/18
OS MUS 8P. 64-A/18
OS MUS 8P. 64-A/18
OS MUS 8P. 64-A/18
OS MUS 102564-A/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A61K38/17, 395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088//(C12P21/C A61K39/395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088//
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CATGGTGTATTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                      240
181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                         241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGAATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
YUKO 1000UCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00, PC
                                                                                                                                                              301 CCAACCACGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02,C12R1:19)
Novel polypeptide and DNA thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .330
/organism="Mu8 sp. "
/organism="genomic DNA"
/mol_type="genon:10095"
/mol_type="taxon:10095"
/db_xncf="taxon:92 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            c 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 330;
                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                    PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
RESULT 4
BD093106
LOCUS
                         COMMENT
                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                       JERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175 GATGTCAAGAAAGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
OGI, SHOICHI OKUI
HIDEYUKI TANAKA
OS Mus sp. (mou
PN WO 0102564-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                           Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 6 11-JAN-2001,
PAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                            Novel polypeptide and its DNA.
BD093106
BD093106.1 GI:22638694
WO 0102564-A/6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 384)
                                                                                                                                                                                                                             Mus sp
                                                                                                                                                                                                                                                                                                                                              BD093106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RSEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PC C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50,G01N33/53//
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SHINICHI MOGI,
PI YUKO NOGU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               carddrdiarrranddaraaachrichteradaaaadroddocddardaddadrdrdrc 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A61P19/08
Mus sp. (mouse WO 0102564-A/6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism='Mus sp. (mouse)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 10
                 (mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 330; DB 6; Length 384;
Pred. No. 2.7e-90;
D; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                      384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             107 t
                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                   PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

á

B Ş В Ş Вb δ B Ś

밁 Ş 8

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                    RESULT 5
AF243504
LOCUS
                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                              TITLE
                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 CCAACCACGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                     355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   175 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    115 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
2 (bases 1 to 929)
Cohen-Salmon, M., Fr
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                      mesenchyme
J. Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 114
                                                                                                                                                              Cohen-Salmon, M., Frenz, D., Liu, W., Verpy, E., Voegeling, S. and
                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 929)
                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                          Mus musculus fibrocyte-derived protein (Fdp) mRNA, AF243504
                                                                                                              Fdp, a new fibrocyte-derived protein related to MIA/CD-RAP, has an in vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                            AF243504.1 GI:11991841
                                                                                                                                                                                                                                                                                                                                                 AF243504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                         0998416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATTGGAATTGGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 330; DB 6;
100.0%; Pred. No. 2.7e-90;
/ative 0; Mismatches 0;
                                                                                  275 (51), 40036-40041 (2000)
                 Frenz,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               111 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                            929 bp
               Verpy, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   107 t
                                                                                                                                                                                                                                                                                                                                             mRNA
              Voegeling, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 384;
                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                 and
                                                                                                                                                                                                                                                                                                                          complete cds.
                                                                                                                                                                                                                                                                                                                                          ROD 26-DEC-2000
               Petit, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
RESULT 6
BD010821
LOCUS
                                                                                                                                                                                         SOURCE
                                                                COMMENT
                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                       TITLE
                                                                                           JOURNAL
                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
              Ito, Y., Nishi, K., Ogi, K., Okubo, S., Mogi, S., Noguchi, Y.,
Yoshimura, K. and Tanaka, H.
TLE Novel polypeptide and DNA thereof
Patent: UP 2001069994-A 22 21-MAR-2001;
TOS Mus sp. (mouse)
PD 21-MAR-2007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                             243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TATACTATTTCTCTGGCAAGAGCACAGGAGAGTTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 947)
                                                                                                                                                                                                                BD010821.1 GI:18639194
JP 2001069994~A/22.
                                                                                                                                                                                                                                                Novel polypeptide and DNA thereof. BD010821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (09-MAR-2000) Biotechnologies, Institut Pasteur, 25 rue du Dr. Roux, Paris 75015, France
                                                                                                                                                                                                                                                                                                                                                                                                                        TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 392
                                                                                                                                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dr. Roux, Paris 75015, Fra
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
/product="fibrocyte-derived protein"
/protein_id="AAG42355.1"
/protein_id="AAG42355.1"
/db xref="GI:11991842"
/translation="MARILILLLGGIVVLCAGHGVFMDKLSSKKLCADEECVYTISLA RAGEDYNAPDCRFIDVKKGQQIVYYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS NLVKEQRVYQEATKEIPTTDIDFFCE"
a 156 c 220 g 293 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'gene="Fdp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="Fdp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 330; DB 10; 100.0%; Pred. No. 2.9e-90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                      947 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             France
                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 929;
                                                                                                                                                                                                                                                                PAT 31-JAN-2002
                                                                                                                                                   Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                         RESULT 7
BD093122
LOCUS
                                                                                                                                                                                                                                                               DEFINITION ACCESSION
                                                   COMMENT
                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                       TITLE
JOURNAL
                                                                                                                                                 AUTHORS
                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 330; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                               365
                                                                                                                                                                                                                                                                                                                                                                                                                     305
                                                                                                                                                                                                                                                                                                                                                                            301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125
HIDEYUKI TANAKA
OS Mus sp. (mouse)
PN WO 0102564-A/22
PD 11-JAN-2001
PF 29-JUN-2000 WO 2000JP004278
                                                                                                                                                                                                                                                         Novel polypeptide and its DNA. BD093122
                                                                                                                                                                                                                                WO 0102564-A/22.
                                                                                                                                                                                                                                             BD093122.1 GI:22638710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOEFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PC C07K14,
G01N33/53/,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              279 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism='Mus sp. (mouse)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
/db_xref="taxon:10095"
158 c 221 g 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Score 330; DB 6;
; Pred. No. 2.9e-90;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1. .947
                                                                                                                                                                                                                                                                                   947 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           289 t
                                                                                                                                                                                                                                                                                      DNA
```

```
121 GATGTCAAGAAAGGGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
Novel polypeptide and its DNA
Patent: WO 0102564-A 22 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                             Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 bases 1 to 947)
1 to.Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PR
PI YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,
SHINICHI MOGI,
PI YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGÄGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YUXO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
CC C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
A61P19/08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 947;
                                                                                                                                                                                                                                                                                                                                                                                            PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PI
                                                                                                                                                                                     Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MMU243939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
           JOURNAL
                                                      AUTHORS
                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125 TATACTATTTCTCTGGCAAGAGCACAGGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent polymorphism that abolishes translation Genomics 71 (1), 40-52 (2001)
Direct Submission Submitted (20-JUL-1999) Rendtorff N.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                  2 (bases 1 to 958)
Rendtorff, N.D.
                                                                                                                                                                                                                                      Rendtorff, N.D., Frodin, M., Attie-Bitach, T., Vekemans, M. and
                                                                                                                                                                                                                                                                                                                                       melanoma inhibitory activity-like protein; Mial gene Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus mRNA for melanoma inhibitory activity-like protein
                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                    AJ243939
AJ243939.1 GI:12619174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MMU243939
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Mial gene).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PI MOGI,
PI YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
PC C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
A61K38/17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCAGCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JUN-1999 JP 99P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
/db_xref="taxon:10095"
158 c 221 g 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 330; DB 6; 100.0%; Pred. No. 2.9e-90; cive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           958 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186718
                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
  Department of Medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ROD 29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

S В Ş 밁

Ş B δ 밁 Ś å

```
SOURCE
ORGANISM
             REFERENCE
                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                      KEYWORDS
                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                              258 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                   181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      198 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 1054)
                                                                                                                      Mus musculus otoraplin mRNA, AF233333 
AF2333333.1 GI:8927429
                                                            Mus musculus
                                                                                Mus musculus (house mouse)
                                                                                                                                                                             AF233333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CATGGTGTATTTATGGATAAACTTTCTTATAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genetics, Institute of Medical Biochemistry and Genetics, Blegdamsvej 3, 2200 Copenhagen N, DENMARK Related sequence: AJ242552.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 407
                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 273 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
NLVKEQRVYQEATKEIPTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene≖"Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start=1
/product="melanoma inhibitory activity-like protein"
/protein_id="CAC27944.1"
/db_xref="GI:12619175"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'gene≃"Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tissue_type="whole fetus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       map="79.4-80 cM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   location/Qualifiers
                                                                                                                    GI:8927429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 330; DB 10; 100.0%; Pred. No. 2.9e-90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stage="12.5 pc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                      complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 958;
                                                                                                                                                                     ROD 06-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
REFERENCE
AUTHORS
                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                       RESULT 10
BD010836
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
MEDI.INE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                   SOURCE
                                                                                                                                        ACCESSION
                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                             372
                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                            252
                                                                                                                                                                                                                                                                                                                                                                                                             192 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   132 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
        1 (bases 1 to 330)
Ito,Y., Nishi,K., Ogi,K.,
                                                                                                             BD010836.1 GI:186
JP 2001069994-A/37
                                                                                                                                         Novel polypeptide and DNA thereof BD010836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72
                                                   Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                 Rattus sp.
                                        Rattus.
                                                                                                 Rattus sp.
                                                                                                                                                                     BD010836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Robertson, N.G., Heller, S., Lin, J.S., Resendes, B.L., Weremowicz, S., Benis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C.
A novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping Genomics 66 (3), 242-248 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (10-FEB-2000) Pathology, Brigham and Women's Hospital, Francis Street, Boston, MA 02115, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 1054)
Robertson, N.G., Heller, S., Lin, J.S., Resendes, B.L., Weremowicz, S., Denis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                   GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10873378
                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACTATTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS NUVKEQRVYQEATKEIFTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="otoraplin"
/protein_id="AAF82079.1"
/db_xref="GI:8927430"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note="OTOR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                         GI:18639209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 330; DB 10;
Pred. No. 2.9e-90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             265 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                  330 bp
        Okubo, S., Mogi, S.,
                                             Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              310 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1054;
        Noguchi, Y.,
                                                                                                                                                                PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131
                                                                                                                                                                                                                                                                                                                                                      311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191
                                                                                                                                                                                                                                                                                                                                                                                                             251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                       KEYWORDS
SOURCE
ORGANISM
                                                                                                                               DEFINITION
ACCESSION
VERSION
                                                                                                                                                                           RESULT 11
BD093137
LOCUS
                                  REFERENCE
                                                                                                                                                                                                                                                  멂
                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                               र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                308;
                                                                                    Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
1 (bases 1 to 330)
Ito,Y., Nishi,K., Ogi,K.,
Yoshimura,K. and Tanaka,H
                                                                                                                                            Novel polypeptide and its DNA, BD093137
                                            Rattus.
                                                                                                                WO 0102564-A/37.
                                                                                                                             BD093137.1 GI:22638725
                                                                                                                                                                          BD093137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SA E C P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PC C07K14
G01N33/53/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yoshimura, K. and Tanaka, H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 37 21-MAR
TAKEDA CHEMICAL INDUSTRIES LTD
OS Rattus sp. (rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PR PR PS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                              CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus sp. (rat)
JP 2001069994-A/37
21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bource 1. .330
/organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DNA
/db_xref="taxon:10118"
62 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Rattus sp."
/mol type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89.3%;
                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86
t
```

```
121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 294.8; DB o;
Pred. No. 1.8e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
Okubo, S., Mogi, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-MAR-2001;
                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 330;
  Noguchi, Y.,
                                                                                                                                                                                                                                                                         PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                               RESULT 12
BD010835
LOCUS
                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                            /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
   TITLE
                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                     301 CCAACCACGGATATTGACTTCTTCTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 GGAGAGTTTTTGGGCTGGCAGTGTTTTATGGTGACCACCACGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GATGTCAAGAAAGGGCAGCAGCATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OGI, SHOICHI OKUBO, SHII
HIDEYUKI TANAKA
OS RAKTUS SD. (Fat)
PN WO 0102564-A/37
PD 11-JAN-2001
PF 29-JUN-299 JP 991
PI YASUAKI ITO, KAZUNO
                                                                      Rattus sp.
Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
             1 (bases 1 to 384)
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGGGGGATGAGGAGTGTGTC
                                                                                                                                                                       JP 2001069994-A/36.
                                                                                                                                                                                      BD010835.1 GI:18639208
                                                                                                                                                                                                                           Novel polypeptide and DNA thereof.
                                                                                                                                                                                                                                                 BD010835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and its DNA
Patent: WO 0102564-A 37 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1990 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
polypeptide and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89.3%;
93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 294.8; DB 6; Length Pred. No. 1.8e-79; Indels
 DNA thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86
t
                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22; Indels
                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                           PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
```

SOURCE ORGANISM

Rattus sp.

Rattus sp.

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;

KEYWORDS

REFERENCE

Kattus.

(bases 1 to 384)

AUTHORS

TITLE JOURNAL

Ito,Y., Nishi,K., Ogi,K., Okubo,S., Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 36 11-JAN-2001,

Mogi,

11-JAN-2001;

```
RESULT 13
BD093136
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                  Ś
                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                             175
                                                                                                                                                         355
                                                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                             235
                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                       301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                          241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                              115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TATACTATTTCTCTGGCAAGAGCACAGAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55
Novel polypeptide and its DNA.
BD093136
BD093136.1 GI:22638724
WO 0102564-A/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent: JP 2001069994-A 36 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
OS Rattus sp. (rat)
PN JP 2001069994-A/36
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
                                                                     BD093136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PC C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC G01N33/53//
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h
Similarity 93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                               GATGTCAAGAAAGGGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                            GEAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGCATTCTGGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                           AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGCATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bource 1. .384
/organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="genomic DNA
/db_xref="taxon:10118"
72 c 109 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Rattus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 294.8; DB 6; Pred. No. 1.8e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                  384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105
                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 384;
                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                  27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                           234
                                                                                                                                                                                                                                                                                                                                                                                                                              174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                114
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                  RESULT 14
BD010830
LOCUS
                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                        355
                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                              295
                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A61K38/17,
PC A61K39/
PC 02,C12R
CC
CC
FH Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA OS RAETUS SP. (Tat.)
PN WO 0102564-A/36
PD 11-JAN-2001
PP 29-JUN-2000 WO 2000JP004278
PR 30-JUN-399 JP 99P 186718
PR 30-JUN-1999 JP 99P 186718
PR 30-JUN-1999 JP 99P 186718
            Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Yoshimura,K. and Tanaka,H. Novel polypeptide and DNA thereof Patent: JP 2001069994-A 31 21-MAR-2001;
                                                                                                                                                                                                           Novel polypeptide and DNA thereof. BD010830 BD010830.1 GI:18639203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                        Rattus sp.
                                                                                                      Rattus.
                                                                                                                                                                                           JP 2001069994-A/31.
                                                                                                                                                                                                                                                                  BD010830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dd
1d
TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCAAGAGCACAGGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                       CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAGTTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTTGTAGGT
                                                                                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACCATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 174
                                                                                  (bases 1 to 307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/70B8//(C12P21/02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches 22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 294.8; DB 6
Pred. No. 1.8e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers.
                                                                                                                                                                                                                                                                  307 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             105 t
                                                                                                                                                                                                                                                                                                                                                        384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 384;
                                                                                                                                                                                                                                                                  PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    234
```

```
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                       RESULT 15
BD093131
                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                         ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                          KEYWORDS
                                                        TITLE
                                                                                       AUTHORS
                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                          307 C
                                                                                                                                                                                                                                                                                                                                                                                         300 C
                                                                                                                                                                                                                                                                                                                                                                                                                         247 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTATACCAGGAGGGCCACCAAGGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          127 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A61P19/08,
PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
CFH Key
FH Key
FT Source
FT /organi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283;
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 31 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI,
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMUI
                                                                                                                  Rattus sp.
Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OS
PN
PD
PF
PR
PI
PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                     BD093131.1 GI:2
WO 0102564-A/31.
                                                                                                                                                                                                                                                     Novel polypeptide and its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCAGCGTGTATACCAGGA-GGCCACCAAGGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGT
                                                                                                      (bases 1 to 307)
                                                                                                                                                                                                                                                                                                                                                            307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus sp. (rat)
JP 2001069994-A/31
21-MAR-2001
29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHI MOGI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism='Rattus sp. {
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Rattus sp."
/mol_type="genomic DNA
/db_xref="taxon:10118"
                                                                                                                                                                                                                         GI:22638719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 261.8; DB 6
Pred. No. 2.5e-69;
0; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (rat)'.
                                                                                                                                                                                                                                                                      ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 6;
                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 307;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                        linear
      YOSHIMURA,
                                                                                                                                                                                                                                                                        PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
                                                                                                                                                                                                                                                                        27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                    KAZUHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                         306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PC
```

```
Search completed: December 30, 2003, 04:07:59 Job time : 1046 secs
                                                                                                                         Ş
                                                                                                                                                                  밁
                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 79.3%; Score 261.8; DB 6; Length 307; Best Local Similarity 94.0%; Pred. No. 2.5e-69; Matches 283; Conservative 0; Mismatches 17; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                  307 C 307
                                                                                                                           300 C 300
                                                                                                                                                                                       241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGA-GGCCACCAAGGAGAT 299
                                                                                                                                                                                                                                              187 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 246
                                                                                                                                                                                                                                                                        181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                127 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 186
                                                                                                                                                           247 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTATACCAGGAGGGCCACCAAGGAGAT 306
                                                                                                                                                                                                                                                                                                                                                          121 GATGTCAAGAAAGGGCAGCAGAICTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                67 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TATACTATTICTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PI MOGI,
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PC C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00, PC
A61K38/17,
PC A61K39/395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088//(C12P21/PC 02, C12R1:19)
CC
FH Key Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HIDEYUKI TANAKA
OS RATCUS SP. (rat)
PN WO 0102564-A/31
PN WO 1012564-A/31
PD 11-JAN-2001
PF 29-JUN-2000 WO 2000JP004278
PR 30-JUN-1999 JP 99P 186718
PR 30-JUN-1999 JP 99P 186718
PR 30-JUN-1999 JP 99P 186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
a 56 c 90 g 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers.
Location/Qualifiers
1. .307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99
```

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     December 30, 2003, 01:02:37; Search time 1098.31 Seconds (without alignments) 7302.593 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22781392 seqs, 12152238056 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-25
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         catggtgtatttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                             em htc:
gb est1: *
gb est2: *
gb htc: *
em_gss_pro:*
em_gss_rod:*
em_gss_phg:*
em_gss_vrl:*
gb_gssl:*
gb_gss2:*
                                                                                                                                                                                                                                                                                                                                                                 em_estpl:*
em_estro:*
                                                                                                                                                                                                                             gb_est4:*
gb_est5:*
em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                              em_estin:*
em_estmu:*
                                                                                                                  em_gss_vrt:*
em_gss_fun:*
em_gss_mam:*
                                                                                                                                                               em_gss_inv: *
em_gss_inv: *
em_gss_pln: *
                                                                                                                                                                                                                                                                                                                                                                                                                                              em_esthum: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estba: *
                                                                                                                                                                                                                                                                                                                                                                                                 em_estov:*
                                                                                                   em_gss_mus:*
                                                                                                                                                                                                                   em_estom:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             45562784
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES	

4.	ω	2	_	No.	Result
			330	Score	
100.0	100.0	100.0	100.0	Match	Query
534	514	488	398	Length	
13	13	13	1	BB	
BQ564134	BQ568498	BQ564607	BQ570035	1	
BQ564134 gilldol.y	B0568498 gi109c02	BOS64607 dilahoo v			

	O.						Ω			Ω									Ω																					
5	4	ü	2	Ξ	ö	9	8	37	ő	i G	34	ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	ø	œ	٠ ٦	σ	· UT
·	ω.	Ψ	63.4	63.4	64.4	67.4	67.4	68	74	81.8	81.8	89.8	91.8	98.8	99.2	101.8	102	102.4			124.6				142.4		196	204	206	244	286.4	300			328.4		330	330	330	330
19.2	.~	.~	.~	٣.	۳.	.~	\cdot		.~		**	. 7	7	w				-	N	7	7	Н	\vdash	w	ω	7	φ	-	N	w	6	0	ω	S	9	8	0	0	00	8
465														9																										
9		-	_	~	**	-	_					w	**	w	w		w	w	w				0	\vdash	w	0	w	w	w	w	w	w	w	w	w	0	w	w	w	w
AA003262	23	ű	w	25	57	76	88	6.1	Ł	\mathbf{r}	20	21		84	94	۸.	45	N. 1	76	i n		97	92	96	22	44	24	77	378	<u>.</u>	62	34	41	93	63	54	76	4	94	
AA003262 mg51c10.r	423 missfor	9338 gil26g	19350 BB749150	7257 0184011	6570 AMGNNUC:	9768 UI-R-FS0)8982 UI-R-E	321 AV169321	70333 650479	1964	7905 AL717905	7219 qi82h08.	0404 AGENCOL	14840 BX44484	18941 BX41894	1345 df21c01.v	54457 gil7al2.	59268 gil25al2	53767 qi06c09	5854 AL925854	3324 d£53d01	2797 mv77b12.	17928 BB647928	47965 Mus musc	63227 qi01a05	36443 144645	48241 CH3#018	66776 qi69b07	6878	65179 ai32a0	32622 BY232622	67343 qi88d08	65411 qi37b12.	66932 gi73g09.	65637 qi42q03.	11549 BB611549	63768 gi06c09	8471 gi108g0	6494	69741 gi135f

e grand and a

ALIGNMENTS

FEATURES	JOURNAL COMMENT	AUTHORS TITLE	REFERENCE	SOURCE ORGANISM	ACCESSION VERSION KEYWORDS	RESULT 1 BQ570035 LOCUS DEFINITION
Structural Cell Biology National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599 Fax: 301-402-1765 Email: kacharb@nidcd.nih.gov Plate: 143 row: b column: 10 Seq primer: M13RP1 reverse primer (ABI). Location/Qualifiers	Onset of hearing Unpublished Contact: Kachar, B.	Kachar, B. EST analysis of gene expression in the mouse Organ of Corti at the	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 398)	Mus musculus (house mouse) Mus musculus	BQ570035.1 GI:21473352 BST.	BQ570035 BQ570035 398 bp mRNA linear EST 19-JUN-2002 gi143b10.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone qi143b10 5', mRNA sequence

```
BASE COUNT
                      Matches
                                                                    Best Local Similarity
                                                                                                                  Query Match
                      330;
                                                                                                                                                                                                                                                                                        105 a
                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ECOR I and Xhou Character than 400bp and 1000 bp respectively. The CDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp respectively. The CDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the grown in 96 well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert56 (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGARACKETARCACC) and 25% strength BioDve terminator secuence in the size of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the conseque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 15 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcribtase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with Ecord I adapters in the presence of ligated Signature.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male and female"
/dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/clome lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from p6; 60 from p7; 46 from p8; 11 from p9; 20 from p10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                               strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using PoP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               db_xref="taxon:10090"
                                                   100.0%; Score 330; DB 13; Length 398; 100.0%; Pred. No. 3.1e-92;
                                                                                                                                                                                                                                                                                        69
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _type="mRNA"
           0,
                                                                                                                                                                                                                                                                                  116 g
     Mismatches
                                                                                                                                                                                                                                                                                        108 t
     Indels
0;
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            먕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ564607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             488 bp mRNA linear EST 19-JUN-200: gil9h02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil9h02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plate: 19 row: h column: 02
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: kacharb@nidcd.nih.gov
Plate: 19 row: h column: 02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    {\tt EST} analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ564607.1 GI:21467924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGTCAAGAAAGGGCAGGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTTGGGCAGTGTTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 488)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301-402-1765
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P5; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlabad, CA), according
to manufacturer's instructions. Reverse transcription and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
/clone="gi19h02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                 sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            246
```

1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60

Best Local Similarity Query Match 181 181 121 121 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC 330; 61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC 120 CCAACCACGGATATTGACTTCTTCTGTGAA 330 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180 CCAACCACGGATATTGACTTCTTCTGTGAA 390 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 360 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT nilarity 100.0%; Score 330; DB 13; 100.0%; Pred. No. 3.5e-92; Conservative 0; Mismarchan ? 143 vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using woloney murine leukemia virus reverse transcribed using synthesis was synthesized with DNA polymerase and RNase H. Complementary NA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The CDNA was sequentially size fractionated over Pharmacia size Sep400 (Pharmacia, Uppsala, Sweden), and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNA systems then directionally ligated with EcoR I and Xho I. The phagemid was packaged with Gigapak il Gold and, upon titration on XLI Blue MRF, cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the presence plasmid DNA clones were selected and grown in 95-well, z ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the concerts (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGAAACAGGTATGACC) and 25% signatured on JTO automated capillary sequencers using pop5 polymer (Applied Biosystems, Foster City, CA). Sequencing reactions, were perfect (CAGAAACAGGTATGACC) and 25% signatures using pop5 polymer (Applied Biosystems, Foster City, CA). Sequencing reactions, 45% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are bresent in GenBank and have know function. genes are present in GenBank and have know function, 23% have hits in GenBank, but do not have assigned function, 12% are uncharacterized ESTs and 20% are unidentified." 83 C 135 g 127 t Indels Length 488; 0 Gaps 240 180

ORIGIN BASE COUNT

Matches

Ş 맑 Ś 뭐 Ş В Ş В ઇ В

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
BQ568498
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91109c02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi109c02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 109 row: c column: 02
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      wautonal Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ568498.1 GI:21471815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases
/dev_stage="most natal day 5 to 13"
/dev_stage="post natal day 5 to 13"
/dev_stage="post natal day 5 to 13"
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The organ of Corti (CC) was fine dissected from a total of 38 organ of Corti (CC) was fine dissected from ps; 72 from ps; 60 from ps; 46 from ps; 18 from ps; 20 from p10; 14 from ps; 60 from ps; 46 from ps; 18 from ps; 20 from p10; 14 from ps; 60 from ps; 46 from ps; 18 from ps; 20 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from ps; 60 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 to 514)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119 TATACTATTTCTCTGGCAAGAGCACAGGAAGTTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        179 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59
Contact: Kachar,B.
Structural Cell Biology
National Institute of Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  534 bp mRNA linear EST 19-JUN-2002 gilld01.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gilld01 5', mRNA sequence.
                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                     Unpublished
                                                                                                                                                EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ564134.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ564134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 100.0%; Score 330; DB 13; Similarity 100.0%; Pred. No. 3.7e-92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAGTTTTGGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96 (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal N13 reverse primer (CACGAAAAAGGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:21467451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85
C

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178
```

RESULT 4 BQ564134

В

S 밁 Ş 밁 Ś 밁

8 Ş

COMMENT

BASE COUNT

155

REFERENCE

AUTHORS

TITLE JOURNAL

CEYWORDS VERSION ACCESSION

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: kacharb@nidcd.nih.gov
Plate: 11 row: d column: 01
Seq primer: M13RP1_reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total NAW was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reveree transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker primer and transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with Econ I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak II Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 resombinants. Stratagene's Exassist Interference resistance helper phage (Catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well. 2 ml growth plate. Plasmid DNA was stranted culture with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% etreacts before a selected with the conservation of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% etreacts before the constructed by the manufacturer. ESTS from the phage constructed with the constructed with the constructed with the constructed with the constructed with the construc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13, After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="taxon:10090"
```

- Carrier of the Secretary

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     357 CCAACCACGGATATTGACTTCTTCTGTGAA 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        237 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: 135 row: f column: 01
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Structural Cell Biology
National Institute of Deafness and other Communication Disorders
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         560 bp mRNA linear EST 19-JUN-2002 gi135£01.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil35£01 5', mRNA sequence.

BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST analysis of gene expression in the mouse Organ of Corti at the conset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ569741.1 GI:21473058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
/Sexx "male and remale //Sex "male and remale //Sex "male and remale //Sex male and remale //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex male //Sex ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
/clone="gi135f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 330; DB 13; Length 534; 100.0%; Pred. No. 3.7e-92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,,
0
```

160 a was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro fasttrack kit (catalog # K1593-02; Invitrogen, Carlabad, CA), according to manufacturer's instructions. Reveree transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gispack XII Gold Cloning kit (catalog # 27621) both manufacturer's instructions. Briefly: 15 ug mRNA was reverse transcribed using a hybrid oligo(df) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker primer and transcribed using Moloney murine leukemia virus reverse transcribed with Mno I. The cDNA was sequentially size fractionated with MNO I. The cDNA was sequentially size fractionated over pharmacia size sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp. respectively. The cDNA was sequentially ligated with Uni-Zap XR vector, which had been predigested with Gispapak in Gold and, upon titration on XLI Blue KRR' cells, the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth place. Plasmid DNA was purified from 200 ul of saturated culture with the concerts of Mn) saturated plasmid DNA from the phages. Upon plating of the grown in 96-well, 2 ml growth place. Plasmid DNA was considered with the cDNA clones were selected and prific of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the grown of the phage of the phage of the grown of the phage of the grown of the phage of the

밁 밁 Ś Ś 밁 Matches 330; Conservative Query Match Local Similarity 181 180 GATGTCAAGAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 239 120 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 179 61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC 120 60 1 CATGGTGTATTATGGATAAACTTTCTTCTAAGAAGTTTGTGTGCGGATGAGGAGTGTGTC 60 GGAGAGTTTTGGGGTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180 CATGGTGTATTTATGGÁTAAACTTTCTTCTAAGAAGTTGTGTGTGCGGATGAGGAGTGTGTC 119 100.0%; Score 330; DB 13; Length 560; 100.0%; Pred. No. 3.8e-92; 0; Mismatches Indels 0 Gaps

BASE COUNT ORIGIN

밁 Ś

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ564944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360 CCAACCACGGATATTGACTTCTTCTGTGAA 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300 TATTTCCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: 27 row: g column: 09
Seg primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          פניטישישיי 608 bp mRNA linear EST 19-JUN-200:
gi27g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gi27g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 608)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ564944.1 GI:21468261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BQ564944
Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721). Stratagene) and Uni-Zap XR Gigapack III Gold Cloning Kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid cligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTp. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Ftu DNA polymerase, ligasted with Scor I adapters in the presence of ligase and digested with Xho I. The CDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti CDNA pBluescript; The
/clone_rorgan: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10,
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsula of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         db_xref="taxon:10090"
clone="gi27g09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mol_type="mRNA'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear EST 19-JUN-2002
```

ACCESSION VERSION

SOURCE

ORGANISM

Mus musculus

Mus musculus (house mouse) BQ568471.1 GI:21471788

KEYWORDS

REFERENCE

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridáe; Murinae; Mus 1 (bases 1 to 630)

RESULT 7 BQ568471

DEFINITION

630 bp mRNA linear EST 19-JUN-2002 gil08g04.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil08g04 5', mRNA sequence.

Ś 밁 밁

5

Ş В 7 밁

밁

Ş

```
Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
          367
                                                                          301
                                                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                              GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                        TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 366
                                                                                                                                                                                        GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        resistance helper phage (Catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the CDNA clones were generated with the strength Bigbye terminator sequencing chemistry (Applied Blosystems, Poster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Blosystems, Foster City, CA).

The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ប
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XL1 Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference
                                                                                                                                                                                                                                                                      IGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTAGGT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 330; DB 13; Length 608; 100.0%; Pred. No. 4e-92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

BASE COUNT

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOUI'NAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: 108 row: g column: 04
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Structural Cell Biology
National Institute of Deafness and other Communication Disorders
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kachar, B.
EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                     /dev_stage="mote and temale"
/dev_stage="mote and temale"
/dev_stage="mote natal day 5 to 13"
/dolone_lib="Myouse Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (p) day 5; 72
from p6; 60 from p7; 46 from p8; 18 from p9; 20 from p10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fratrack kit
(catalog # K159-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Strategene) and Uni-Zap XR
vector kit (catalog # 237211, Strategene) and Uni-Zap XR
digapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briselly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(d7) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker-primer and transcribed using
voloney murine leukemia virus reverse transcribed with
ECOR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over pharmacia size sep400 (Pharmacia, Uppsala, Sweden)
and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA)
respectively. The cDNA was then directionally ligated to
the Uni-Zap XR vector, which had been predigested with ECOR I and Xho I. The phagemid was packaged with Gigapak
yield of the phage library was estimated to be 11,100,000
resistance helper phage (catalogue # 21123) was adopted
to rescue plasmid DNA from the phages. Upon plating of the
grown in 96-well, 2 ml growth plate. Plasmid DNA was
purified from 200 ul of saturated culture with the
strength BigDye terminator sequencing chemistry (Applied Blosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Blosystems, Foster
                                                                                                                                                                                        Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="gi108g04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
```

```
REFERENCE
AUTHORS
                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 TATTTCCCCAGCAACTTGGTGAAGGAGGAGGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                 Email: kacharb@nidcd.nih.gov
Plate: 06 row: c column: 09
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                     Structural Cell Biology
National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ563768 684 bp mRNA linear EST 19-JUN-200 gi06c09.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi06c09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                               Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                     Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                             onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ563768.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ563768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 684)
                                                                                                                                                                                                 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                            /mo1
db_xref="taxon:10090"
                      /strain="BALB/c"
                                                            organism="Mus musculus"
                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." a 111 c 167 g 174 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           City, CA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:21466749
                                          _type="mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 330; DB 13; 100.0%; Pred. No. 4.1e-92; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The frequency distribution of the library is
                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

'dev_stage="Post natal day 5 to 13"

clone="gi06c09" sex="male and female"

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                 61
                                                                                                                                                                                                                                          67
                                                                     TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                          TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                       CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                        194 a
                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total RNA was carterinary dissecuted out of the modulosits. Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using wholoney murine leukemia virus reverse transcribes was primed with the linker primer and transcribed with Ecox I adapters in the presence of ligase and digested with Ecox I adapters in the presence of ligase and digested with Ecox I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech chroma Spin-1000 (Clontech, Falo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference the Uni-ZAP XR vector, which had been predigested with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference and greated to be constructed by the manufacturer. ESTs from the phages. Upon plating of the greater based culture with the Stratagene's Exassist Interference and the stratagene's care generated with the universal Mis reverse primer (CAGGAAACGCTATACC) and 25% strength the cDNA clones were generated with the univ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti; Vector: pBluescript; The
organ of Corti; OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (p) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from p12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                               Score 330; DB 13;
Pred. No. 4.4e-92;
                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 13;
                                                                                                                                                                                                                                                                                                                                                                        Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 684;
                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

밁 Ş 밁

Location/Qualifiers

BASE COUNT

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BB611549
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               367 CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 GGAGAGTTTTTGGGCTGGCAGTGTTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 246
                                                                                      Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Yamanaka, I., Kiyosawa, H., Kondo, S., Saito, T., Shinagawa, A., Aizawa, K., Fukuda, S., Hara, A., Itoh, M., Kawai, J., Shibata, K., Arakawa, T., Ishii, Y. and Hayashizaki, Y.
Mapping of 19032 mouse cDNAs on mouse chromosomes. J. Struct. Punc. Genomics 2 pre, L72-L86 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: genome res@gsc.riken.go.jp,

URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh

,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.

Normalization and subtraction of cap-trapper-selected cDNAs to

prepare full-length cDNA libraries for rapid discovery of new

genes. Genome Res. .10 (10), 1617-1630 (2000)

wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,

Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura

"S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 696)
Arakawa, T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hiramoto, K., Hori, F., Ishi, Y., Ito, M., Kawai, J., Konno, H., Kouda, M., Koya, S., Matsuyama, T., Miyazaki, A., Nomura, K., Ohno, M., Okazaki, Y., Okido, T., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagawa, A., Takahashi, F., Takeda, Y., Tanaka, T., Toya, T., Muramatsu, M., and Hayashizaki, Y.
                         Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                               sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)

Konno, Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BB611549 mRNA linear BB611549 RIXEN full-length enriched, 13 days embrungculus cDNA clone 3110083012 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Sughiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RIKEN Mouse ESTs (Arakawa,T., et al. 2001)
Unpublished
e mouse tissues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BB611549.1 GI:15393547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BB611549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                          Y. and Hayashizaki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIKEN integrated sequence analysis (RISA) system--384-format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA linear ...d, 13 days embryo head Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 31-AUG-2001
```

JOURNAL

FEATURES

source

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                           BQ565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                               TITLE
                                                   AUTHORS
                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                        301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 TATTTCCCCAGCAACTTGGTGAAGGAGCCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             198 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                     gi42g03.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi42g03 5', mRNA sequence.

BQ565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78
                                                                                                                                Mus musculus
                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 474)
                                                                                                                                                                                                 BQ565637.1 GI:21468954
                                                                                                                                                                                                                                                                                   BQ565637
                                                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                    musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           204 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       was cleaved with XhoI and SstI."
122 c 176 q 194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. cDNA went through one round of normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Site 1: XhoI; Site 2: SstI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nead"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="13 days embryo"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone_lib="RIKEN full-length enriched, 13 days embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="head"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone="3110083012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 330; DB 10; 100.0%; Pred. No. 4.4e-92; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 696;
                                                                                                                                                                                                                                                                              EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               257
```

```
Structural Cell Biology
National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: 42 row: g column: 03
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                             library constructions Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237512), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMIV-RT) and 5-methyl dCTP. The second strand was synthesized with DAN polymerase and transcriptase synthesized with DAN polymerase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRP: cells, the yield of the phage library was estimated to be 11,100,000 resound library, individual cDNA clones were selected and purified from 200 ul of saturated Culture with the Concerts (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generared with the
the 5 end of the CDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy, 14.3% 2, 12% 3-10, 14.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cervical dislocation followed by decapitation, the bulla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone="gi42g03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _type="mRNA"
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
BQ566932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 329;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          368 CCAACCACGGATATTGACTTCTTCTGTGAA 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             308 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           248 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                Email: kacharb@nidcd.nih.gov
Plate: 73 row: g column: 09
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kachar, B.
EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ566932
409 bp mRNA linear EST 19-JUN-200: gi73g09.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi73g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                        Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                Structural Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ566932.1 GI:21470249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGTGTATTTATGGATAAACTTTCTTCTAATAAGTTGTGTGCGGATGAGGAGTGTGTC 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         145 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
/db_xref="taxon:10090"
/clone="gi73g09"
/sex="male and female"
/dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ETB and 20% are unidentified." a 78 c 131 g 120 t
                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                         strain="BALB/c"
                                                                                                                                                                                                                organism="Mus musculus"
                                                                                                                                                                                                                                          .409
                                                                                                                                                                                          _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99.5%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 328.4; DB 13; Pred. No. 1.1e-91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307
```

102 a Numbership and polymerase and RNase H. Complementary Bynthesized with DNA polymerase and digested with Xho I. The cDNA was sequentially size fractionated with Xho I. The cDNA was sequentially size fractionated with Xho I. The cDNA was sequentially size fractionated with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-AP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211201) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 95-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96 (TM) plasmid purification kit (Invitrogen, Catlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the CDNA clones were generated with the Biosystems, Poster City, CA). Sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing chemistry (Applied Biosystems, Poster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POPS polymer (Applied Biosystems, Poster City, CA). Sequencing of the library is as follows: 72% of genes have 1 copy; 14,3% 2,12% 3-10,14% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (catalog # K159-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721; Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 up mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was stranton as a contain the second strand was was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory OC as follows: 102 samples from post-natal (P) day 5; 72 from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10; 14 from P12 and 24 from P13. After killing animals by cervical dislocation followed by decapitation, the bulla

Best Local Similarity 201 60 CTATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCAT 119 18 1 CATGGTGTATTTATGGATAAACTTTCTTAGAAAGTTGTGTGC-GGATGAGGAGTGTGT 59 CGATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGC 260 CGATGTCAAGAAAGGGCAGCAGCTCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGC 179 CTATACTATTTCTCTGGCAAGAGCACAGGGAAGATTACAATGCCCCAGACTGTAGGTTCAT 200 Conservative 95.1%; 99.1%; 0; Score 313.8; DB 13; Length 409; Pred. No. 3.8e-87; Mismatches 2; Indels 1; Gaps

밁 S B

BASE COUNT

Query Match

Ş

S В Ş 밁

```
RESULT 12
BQ565411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300 CCCAACCACGGATATTGACTTCTTCTGTG 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180 TGGAGAGTTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTAGG 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ565411
490 bp mRNA linear EST 19-JUN-200: gi37b12.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi37b12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Structural Cell Biology
National Institute of Deafness and other Communication Disorders
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plate: 37 row: b column: 12
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ565411.1 GI:21468728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGAT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGG 320
           /dev_stage="Post nata" day 5 to 13"
/dev_stage="Post nata" day 5 to 13"
/dev_stage="Post nata" day 5 to 13"
/dev_stage="Post nata" day 5 to 13"
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcriptase
(MMLV-RT) and 5-methyl dCTP. The second strand was
synthesized with DNA polymerase and RNAse H. Complementary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             kacharb@nidcd.nih.gov
synthesized with DNA polymerase and RNase H. Complementary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lone="gi37b12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 19-JUN-2002
```

ORIGIN BASE COUNT

Query Match Best Local

Similarity

93.2%;

Score 307.6; DB 13; Pred. No. 3.7e-85;

Length 490;

191 a ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon tirration on XLI Blue WRR' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the created library, individual cDNA clones were selected and grown in 95 well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlabad, CA) as instructed by the manufacturer. ESTS from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CARGAAACAGTARGACC) and 25% attracts Righty to the manufacturer. genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."

77 c 109 g 112 t 1 others City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% i1-50 and 0.1% 51-150. As to gene function, 45% of strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POPS polymer (Applied Biosystems, Foster in Capillary Population of the Capillary Sequencers using POPS polymer (Applied Biosystems, Foster Sequencers using POPS polymer (Applied Biosystems, Foster Sequencers using POPS polymer (Applied Biosystems, Foster Sequencers using POPS polymer (Applied Biosystems, Foster Sequencers using POPS polymer (Applied Biosystems, Foster Sequencers using POPS polymer (Applied Biosystems, Foster Sequencers using POPS polymer (Applied Biosystems). DNA was blunt ended with Pfu DNA polymerase, ligated with

货 밁 Ś 밁 S 밁 5 В Ş В 3 Matches 316; 441 301 CCAACCACGATATTGACTTCTTCTGTGAA 330 241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300 181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240 121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180 141 CATGGGGTATTTATGGATAAACTTTCTTCTAAAAATTGTGTGCGGATAAGGAGTGTGTC 200 261 GATGTCAAAAAAGGGCAGCAAATCTATGTTTACTCCAAGCTGGTAACAAAAAAACGGAGCT 320 201 TATACTATTTCTCTGGCAAGAGCACAGGAAAATTACAATGCCCCAAACTGTAGGTTCATC 260 61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120 CCAACCACGGATATTGACTTCTTCTGGGAA 470 TATTTCCCCACCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 440 GGAAAGTTTTGGGCTGGCAGTGTTTATGGGGACCACCAGGATGAAATGGGAATTGTAGGT 380 Conservative 0; Mismatches 14; Indels 0 Gaps

RESULT 13 BQ567343 SOURCE VERSION ACCESSION DEFINITION

BQ567343
604 bp mRNA linear EST 19-JUN-200: g188d08.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone g188d08 5', mRNA sequence. EST. Mus musculus (house mouse) BQ567343.1 GI:21470660 EST 19-JUN-2002

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: 88 row: d column: 08 Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 604)
              /dev_stage="Post natal day 5 to 13"
//clone lib="Mouse Organ of Corti, Ucctor: pBluescript"
//clone lib="Mouse Organ of Corti, Ucctor: pBluescript, The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5, 72
from p6; 60 from P7; 46 from P8; 18 from P9; 20 from P10,
14 from P12 and 24 from P13. After killing anmals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Pasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcribed with
Sho I. The cDNA was sequentially size fractionated
over Pharmacia Size Sep400 (Pharmacia, Upssala, Sweden)
and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA)
Columns to enrich for cDNA sgreater than 400ps and 100 bp
respectively. The cDNA was then directionally ligated to
ECOR I and Xho I. The phagenid was packaged with Gigapak
III Gold and, upon titration on XLi Blue MRF (cells, the
yield of the phage library was estimated to be 11,100,000
resistance helper phage (catalogue # 211203) was adopted
to rescue plasmid DNA from the phages. Upon plating of the
ECOR I and State and State and State and State and State and State and State and State and State and State and State and State and State and State and State and 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301-402-1599
301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             kacharb@nidcd.nih.gov
strength BigDye terminator sequencing chemistry (Applied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mol_type="mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone="gi88d08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Deafness and other Communication Disorders
```

```
S
                                                                                                                              В
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
241 CGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGACTTCTTCTGTGAA 300
                                                      271 CGTGTATACCAGGAGGCCACCAAGGAGATCCCCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                              181
                                                                                                                                                                                                                                                                                 151 TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGGGCTGGCAGTGTTTATGGT 210
                                                                                                                                                                                                                                                                                                                                                         61 GATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGCATCTATGTT 120
                                                                                                                                                                                                                                                                                                                                                                                                             91 GATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTT 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31 AAGAAGTTGTGGCGGATGAGGAGTGTGTTCTATACTATTTCTCTGGCAAGAGCACAGGAA 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 AAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAA 60
                                                                                                                                                                  GACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTTGGTGAAGGAGCAG 270
                                                                                                                     GACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCCAGCAACTTGGTGAAGGAGCAG 240
                                                                                                                                                                                                                                    TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTTGGGCTGGCAGTGTTTATGGT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90.9%; Score 300; DB 13
100.0%; Pred. No. 1e-82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 13; Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

BY232622 LOCUS SOURCE ORGANISM VERSION KEYWORDS ACCESSION DEFINITION

RESULT 14

REFERENCE BY332622

BY332622 RIKEN full-length enriched, adult inner ear Mus musculus CDNA Clone F930026JZ0 5', mRNA sequence. Mammalia; Mus .musculus Mus musculus (house mouse) BY232622.1 GI:26413732 BY232622 (bases 1 to 365) ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus EST 10-DEC-2002

AUTHORS Nikaido, I., Osato, N., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osato, N., Salto, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hassgawa, Y., Nogami, A., Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D., P., Bult, C., Hume, D.A., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Blake, J.A., Bradt, D., Brusic, V., Chothia, C., Corbani, L.E., Cousins, S., Dalla, E., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I.J., Jarvis, E.D., Kanai, A., Kurochkin, I. V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R., Maltais, L., Marchiomi, L., McKenzie, L., Miki, P.A., Magashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Petrovsky, N., Pillai, R., Ponttus, J.U., Oi, D., Ramachandran, S., Ravasi, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M.S., Teasdale, M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Dan, Y., Zimmer, A., M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., K., Kawai, J., Nakamura, M., Sahazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Aizawa, K.

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                          121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                     78
                                                                                                                                                                                                                                                                                                             Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 157-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tissues were provided by Kirk W. Beisel ( Boys Town National Research Hospital 555 North 30th Street Omaha,NE 68131 USA) whose assistance we gratefully acknowledge. Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prepare mouse tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Alzawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hirozane
Alzawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hirozane
,T., Imotani,K., Ishi,Y., Itoh,M., Kawai,J., Konno,H., Miyazaki,A.,
Murata,M., Nakamura,M., Nomura,K., Numazaki,R., Ohno,M., Sakai,K.,
Sakazume,N., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami,M., Waki,K., Watahiki,A., Muramatsu,M. and Hayashizaki,Y. Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suchiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Yoshihide Hayashizaki
          GATGTCAAGAAAGGGCAGCAGATCTATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 420, 563-573 (2002)
                                                                                                                              TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                                                                                                                                                                               TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="inner ear"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/clone="F930026J20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                   86.8%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      līb="RIKEN full-length enriched, adult inner ear" c 110 g 98 t
                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 286.4; DB 13; Pred. No. 1.3e-78;
                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
TTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

Ş 뭉 Ş 밁

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
BQ565179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   485 bp
gi32a07.yl Mouse Organ of Corti
clone gi32a07 5', mRNA sequence.
BQ565179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate: 32 row: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             National Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50/4249 South Drive, NIH, Bethesda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kachar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ565179.1 GI:21468496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCC 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAGTTTGGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCC 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 485)
/dev stage="post natal day 5 to 13"
/dev stage="post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithellum was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Glapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 15 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
ynthesized with the linker-primer and transcribed using
Moloney murine leukemia virus reverse transcriptase
(MMLV-RT) and 5-methyl dCTP. The second strand was
synthesized with DNA polymerase and RNase H. Complementary
DNA was blunt ended with Pfu DNA polymerase, ligated with
EcoR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="gi32a07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA pBluescript Mus musculus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 19-JUN-2002
```

```
Query Match 73.9%; Score 244; DB 13; Length 485; Best Local Similarity 100.0%; Pred. No. 3e-65; Matches 244; Conservative 0; Mismatches 0; Indels
241 TGAA 244
                                                                                                                      327 TGAA 330
                                                                                                                                                                                                                                                                                                       267 GCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACCGGATATTGACTTCTTCTG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147 TGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTTGGGCTGGCAGTGTTTA 206
                                                                                                                                                                                                                               181 GCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCCAACCACGGATATTGACTTCTTCTG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 TGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCCAGCAACTTGGTGAAGGA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 207 TGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTTGGTGAAGGA 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87 GGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTA 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTTGGGCTGGCAGTGTTTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using PoP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual CDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the concert96(TM) plasmid purification kit (Invitrogen, Carlabad, CA) as instructed by the manufacturer. ESTS from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAAAGCTARGACC) and 25% attraction Richers and 25% and 25% and 25% are considered with Brieflys From the CDNA clones were generated with the universal M13 reverse primer (CAGGAAAAGCTARGACC) and 25% attraction Richers and 25% are considered with Brieflys From the CDNA clones were generated with the universal M13 reverse primer (CAGGAAAAGCTARGACC) and 25% attraction Richers and 25% are considered with Brieflys Economic CAGGAAAAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAACAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAAACAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAACAGCTARGACC) and 25% are considered with Brieflys Economic CAGGAAACAGCTARGACC) and 25% are considered wi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

BASE COUNT

Search completed: December 30, 2003, 06:07:16
Job time: 1099.64 secs

Ş В Ś 밁 Ş В Ş

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic - nucleic search, using sw model
                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                         N Geneseq 19Jun03:*

1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
7: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
9: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
10: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
11: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:*
12: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
13: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
14: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
15: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
16: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
17: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
18: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
18: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
20: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
21: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
22: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
23: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
24: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
25: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
25: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
25: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
25: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2003.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-25
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2552756 seqs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              December 29, 2003, 22:01:01; Search time 109.538 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   catggtgtatttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (without alignments)
8132.484 Million cell updates/sec
```

		00 00	
2 1 2 1 2 1 2 E		222222222222222222222222222222222222222	111111111111111111111111111111111111111
	0.00 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	າພພວວວວວຼ	225555555222222222222222222222222222222
1111 144 144 100 100 100 100 100 100 100		19.7 18.2 18.2 17.8	
1060	305 305 417 417 1060 1060 1060 1060	0 2 4 4 4 C C C C C C C C C C C C C C C C	387 426 521 521 521 521 521 891 891 923 1201
	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		22222222 44422222222222222222222222222
ABX98433 ABX98935 ABX98935 ABX98935 ABX98024 ABX98024 ABX78808	AAQ84061 AAQ14828 AAA114828 AAA92775 AAS22695 AAS22459 AAF92140 ABS74460 ABS75738 ABL95738 ABL95738 ABL95738 AAGA6465	AAQ84052 AAH47783 AAQ84050 AAI70083 AAD18732 AAD19229 ABU63602 ABL63602	AAS17583 AAH26341 ABL95740 ABL9551 ABK3571 ABK33571 AAH98228 AAH26342 AAF26342 AAF26343
CUNA encoding huma Human cDNA encodin Novel human secret Human secreted/tra Human PRO polynucl Human PRO polynucl	• • • • • • • • • • • • • • • • • • •	Sequence encoding Recombinant human Sequence encoding Melanoma inhibitor Human antisense ol Human prostate exp Breast cancer rela Breast cancer rela	DNA encoding novel Human growth regul Human angiogenesis Human epo9873 cDNA cDNA encoding human EST-derived Human EST-derived Human growth regul Human growth regul Human growth regul Human growth regul Human growth regul Human murb nucleotide

ALIGNMENTS

```
RESULT 1
WPI; 2001-159271/16
                    Tanaka H;
                            Itoh Y,
                                                                  30-JUN-1999; 99JP-0186718
                                                                                                          11-JAN-2001.
                                                                                                                             WO200102564-A1.
                                                                                                                                                                       MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                               Mus musculus.
                                             (TAKE ) TAKEDA CHEM IND LTD.
                                                                                      29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                               Mouse MLP nucleotide sequence SEQ ID NO:25
                                                                                                                                                                                                                                    23-APR-2001 (first entry)
                                                                                                                                                                                                                                                          AAF59080;
                                                                                                                                                                                                                                                                          AAF59080 standard; DNA; 330 BP.
                                                                                                                                                                   inhibitor, ds.
                            Nishi K,
                           ogi ĸ,
                          Ohkubo s,
                          Mogi S,
                          Noguchi Y,
                         Yoshimura K;
```

Result No.

330 330

Match

Length

DB

Description

294.8 294.8 261.8 252.2 252.2

947 330 384 307 330 384

22222222

AAF59068 AAF59068 AAF59084 AAF59099 AAF59098 AAF59093 AAF59079

Mouse MLP nucleoti
Mouse MLP nucleoti
Mouse MLP nucleoti
Rat MLP nucleotide
Rat MLP nucleotide
Rat MLP nucleotide

Human MLP nucleoti Human MLP nucleoti

100.0 100.0 100.0 89.3 89.3 79.3

```
ARESULT 2
AAF59068
ID AAF5
XX AAF5
AC AAF5
XX MOUS
XX MUP;
KW Join
KW Card
KW Card
KW Card
XX MUS
XX WO20
XX WO20
XX WO20
XX WO20
XX WO20
PN WO20
PR 30-J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF5909 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                    29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                promoters and inhibitors for preventing or treating e.g. bone and diseases % \left( 1\right) =\left( 1\right) +\left( 1\right) 
                                                                                                                                                                                                   11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cardiant; gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse MLP nucleotide sequence SEQ ID NO:10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF59068 standard; DNA; 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 330 BP; 91 A; 60 C; 92 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 10; Page 98; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB; AAB69127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                low-toxicity secretory cell function-regulatory protein and education and complete of DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGAGITTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         therapy; secretory cell function regulator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 330; Db ___,
No. 6.3e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
```

```
RESULT 3
AAF59084
ঠ
                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Sir
Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                 MLP; MIA; melanoma inhibitory activity; cancer; bone disease;
                                                                                                                Mouse MLP nucleotide sequence SEQ ID NO:30
                                                                                                                                                                                                        AAF59084 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 384 BP; 98 A; 68 C; 111 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; Page 93; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               promoters and inhibitors for preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Safe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB; AAB69125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-159271/16.
                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                295
                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                          235
                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of ters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nishi K,
                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATGTCAAGAAAGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGGTGTGTC 60
                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ogi K, Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 330; DB 22;
Pred. No. 6.7e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Noguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 joint
                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114
```

Mus musculus

```
RESULT 4
AAF59099
ID AAF5
XX
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
AC AAF5
XX
A
                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                           Rat MLP nucleotide sequence SEQ ID NO:48.
                                                                                      23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                 AAF59099 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 947 BP; 279 A; 158 C; 221 G; 289 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 2; Page 100-101; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                    365
                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                  305
                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             μ.
                                                                                                                                                                                                                                                                    CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99JP-0186718
    inhibitory activity; cancer; bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 330; DB 22; 100.0%; Pred. No. 9.9e-97;
                                                                                                                                                                 330 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               joint
                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                        304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
AAF59098
ID AAF5
XX
                                                         RESULT 5
                                                                                                                   밁
                                                                                                                                                        S
                                                                                                                                                                                                B
                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 308
                  AAF59098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TAKE )
                                                                                                                   301
                                                                                                                                                        301
                                                                                                                                                                                                  241
                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
              standard; DNA; 384 BP
```

```
The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 330 BP; 91 A; 62 C; 91 G; 86 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 12; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; AAB69131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       greeses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAKEDA CHEM IND LTD
                                       CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                  GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                            GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   89.3%; Score 294.8; DB 22; 93.3%; Pred. No. 1.7e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.7e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             joint
                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

밁

355 CCAACCACGGATATTGACTTCTTCTGTGAA 384

```
Ş
                                                  밁
                                                                               S
                                                                                                                   밁
                                                                                                                                            á
                                                                                                                                                                                 밁
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have intinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rat MLP nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF59098;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 13; Page 105-106; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAB69130.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 384 BP; 98 A; 72 C; 109 G; 105 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                 Match 89.3%;
Local Similarity 93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-159271/16.
                    301
                                                                                                                                                                                   175
                                                    295
                                                                                                                   235
                                                                                                                                                   181
                                                                                                                                                                                                                                                 115
                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                308;
                                                                                                                                                                                                                   121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                  μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exemplification of the present invention.
CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                   GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                   TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                              CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nishi K,
                                                      TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                   GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                   CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                  TATTTCCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                   TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99JP-0186718.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ohkubo S, Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO:46
                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               Score 294.8; DB 22; Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                 .8e-85
                                                                                                                                                                                                                                                                                                                                                                                  22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              joint
                                                                                  300
                                                                                                                                                                                                                                                                                   120
                                                      354
                                                                                                                                                    240
                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                     174
                                                                                                                                                                                                                                                                                                                     114
                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                    294
                                                                                                                                                                                    234
```

```
AAF59093

AAF59093

XX

AC

AAFE

XX

AC

AAFE

XX

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AC

AAFE

AAFE

AC

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AAFE

AA
                                                                                                                                 밁
                                                                                                                                                                                               Ś
밁
                                                              S
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                          Matches 283;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 307 BP; 84 A; 56 C; 90 G; 77 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 9; Page 104; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rat MLP nucleotide sequence SEQ ID NO:41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in the exemplification of the present invention.
127
                                                                  121
                                                                                                                                    67
                                                                                                                                                                                                   61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                           ب
                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard; DNA;
                                             GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                            CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 66
                                                                                                                                                                                                                                                                                                                                           CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nishi K,
AATGTCAAGAAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                        TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                      79.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 261.8; DB 2
Pred. No. 8.5e-75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 307;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

Ś

GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT

240 186 180 126

GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT

밁

187 181

```
S
                                       맑
                                                                    Ş
                                                                                                 B
                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                 Matches
                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                              The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAPS 9063 to AAPS 9099 and AABS 9122 to AABS 9132 represent sequences used
                                                                                                                                                                                                                      Sequence 330 BP; 91 A; 60 C; 91 G; 88 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                       in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                 Claim 8; Page 97; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; AAB69126.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human MLP nucleotide sequence SEQ ID NO:23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF59079 standard; DNA; 330 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-APR-2001 (first entry)
                                                                                                                                                                              Local
121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                       61
                                                                    61
                                                                                                                                                               281;
                                                                                                                1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307 C 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300 C 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                              Similarity
                                                       TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                         CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 60
                             TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTATACCAGGAGGGCCACCAAGGAGAT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGA-GGCCACCAAGGAGAT 299
                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ogi K,
                                                                                                                                                                           76.4%;
85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ohkubo
                                                                                                                                                            ٥,
                                                                                                                                                          Score 252.2; DB 22; Length 330;
Pred. No. 1.2e-71;
0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Noguchi Y,
                                                                                                                                                         Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yoshimura K;
                                                                                                                                                         Gaps
```

Ś

Matches Query Match

Match 76.4%;
Local Similarity 85.4%; 281; Conservative

0

Mismatches

48;

Indels

<u>,</u>

60

Score 252.2; DB 22; Length 384; Pred. No. 1.2e-71;

Sequence 384 BP; 99 A; 70 C; 106 G; 109 T; 0 other;

```
RESULT 8
AAF59065
ID AAF5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                    The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                diseases
                                                                                                                                                                                                                  Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                         Example 1; Page 91; 111pp; Japanese.
                                                                                                                                                                                                                                                                                             P-PSDB; AAB69123.
                                                                                                                                                                                                                                                                                                                                                Tanaka
                                                                                                                                                                                                                                                                                                                                                               Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                          (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cardiant; gene therapy; secretory cell function regulator; inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human MLP nucleotide sequence SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59065 standard; DNA; 384 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF59065;
                                                                                                                                                                                                                                                                                                           2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 GGAGAGITITGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                          Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAACCACGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCACCACGATATTGACTTCTTCTGCGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACCAGATGGGAGTCGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                           99JP-0186718
                                                                                                                                                                                                                                                                                                                                                   Ogi K, Ohkubo S, Mogi S, Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                      Yoshimura
```

```
RESULT 9
AAS17583
ID 17583
ID 26-F
AC AAS1
XX AAS1
XX DNA
XX Secr
XW Anti
KW huma
XX New resp
OS Homo
XX Homo
XX Ney
FT CDS
FT CDS
FT CDS
FT L1-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 11-A
PR 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertiilty; neurological disease; psychiatric disease; cardiovascular disease; respiratory disease; renal; gastrointestinal; ss.
                                                                                                                                                                                         New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer
                                                                                                                                Claim 2; Page 44; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-061975/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-APR-2000; 2000US-196603P.
24-APR-2000; 2000US-199417P.
                                                                                                                                                                                                                                                                                                                                                                                                                            Agarwal P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAS17583 standard; cDNA; 387 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200179454-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding novel secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GATGTCAAGAAAGGGCAGCAGCTCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMITHKLINE BEECHAM CORP. SMITHKLINE BEECHAM PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACGTTAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCACCACGGATATTGACTTCTTCTGCGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                               Murdoch PR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
1...387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product= "Human secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                            Rizvi SK,
                                                                                                                                                                                                                                                                                                                                                                                                                         Smith RF,
                                                                                                                                                                                                                                                                                                                                                                                                                         Xiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  294
```

The invention relates to an isolated novel secreted polypeptide (I) and polynucleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic

Mize NK,

Boyle BJ,

Ford Ħ,

Arterburn

Š,

Tang

```
RESULT 10
AAH26341
ID AAH26
XX AAH26
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX O2-OC
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                  25-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polynucleotides may be used as diagnostic reagents, in chromosome localisation studies, and in tissue expression studies. The present sequence represents the coding sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           disorders, inflammatory disorders, infertility, neurological and psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, or gastrointestinal diseases. These may also be used treat diseases, abnormalities and disorders caused by abnormal expression, production, function and/or metabolism of the genes, as vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the
                                                                                                                                                                                                                                     25-JAN-2001; 2001WO-US02455.
                                                                                                                                                                                                                                                                                                           02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                           WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human growth regulatory-like polypeptide clone 16372272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH26341 standard; cDNA; 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 387 BP; 101 A; 70 C; 106 G; 110 T; 0 other;
                                                                   (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 76.4%;
Similarity 85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                  2000US-0491404.
2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches 48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 252.2; DB 2
Pred. No. 1.2e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 24; Length 387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 234
```

disorder; cancer;

```
ABL95740
ID ABLS
XX
AC ABLS
XX
DT 19-J
                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                19-JUL-2002
                                                ABL95740;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polymucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of malanoma cell growth and tumours, including neuroectodermal tumours such as gliomas. The polymucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is that of Hyseq clone identification number 1637272, which was obtained from a human thymus cDNA library using standard pCR with primers specific for vector sequences flanking the inserts, sequencing by hybridisation sequence signature analysis, and Sanger sequencing techniques. This expressed sequence tag was used in the assembly of a full-length cDNA sequence (see AAH26343) encoding a novel human growth regulatory-like polypeptide (GRLP, see AAB86761). The GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids)
                                                                            ABL95740 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 426 BP; 119 A; 73 C; 113 G; 120 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page 114; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drmanac RT;
                                                                                                                                                                                                                            313
                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73
                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                             CCCACCACGGATATTGACTTCTTCTGCGA
                                                                                                                                                                                                                       TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                GGAGAGTTTTGGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                   AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                               GATGTCAAGAAAGGGCAGCAGCTGTTTTTTTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
               (first entry)
                                                                            CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 76.4%;
85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 252.2; DB 22; Length 426; Pred. No. 1.3e-71;
                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                   252
                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                  192
                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
      Baker KP, Fo
Godowski PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-MAY-2001
                                                                                                                                                                  (GERB/)
(GERR/)
(GODD/)
(GODO/)
(GURN/)
(HILL/)
                                                                                                                                                                                                                                                                                                                                                                                             25-MAY-2001;
30-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-DEC-2000; 2000WO-US34956
22-JAN-2001; 2001US-0767609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; angiogenesis; PRO protein; cardiovascularisation; wound; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
                                                                                                                                                                                                                                                                                                                                                                              30-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-AUG-2000;
24-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-AUG-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JUL-2000;
28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUL-2001; 2001WO-US21735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200208284-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiarteriosclerotic; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human angiogenesis related cDNA PRO9873
                                                WATANABE C K. WILLIAMS P M. WOOD W I.
                                                                                             PAN J.
PACNI N F.
STEPHAN J F.
                                                                                                                                              GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                            GODDARD A.
GODOWSKI P J.
                                                                                                                                                                                                                                                                                             GENENTECH INC.
                                                                                                                                                                                                                                GERRITSEN M E
                                                                                                                                                                                                                                                  GERBER
                                                                                                                                                                                                                                                               FERRARA
 Ferrara N, Ge
J, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US30873.
2000WO-US32678.
2000US-0747259.
                                                                                                                                                                                                                                                                                                                                            2001WO-US17800.
2001WO-US19692.
                                                                                                                                                                                                                                                                                                                               2001WO-US00000
                                                                                                                                                                                                                                                                                                                                                                            2001WO-US17443
                                                                                                                                                                                                                                                                                                                                                                                              2001US-0870574.
                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US17092
                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-0866034
                                                                                                                                                                                                                                                                                                                                                                                                                                             2001US-0866028
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-0854280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001US-0828366
2001US-0854208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001US-0808689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001WO-US06666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001US-0796498
2001WO-US06520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US30952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0709238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-219556P
                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0664610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US23522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0643657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-220664P
   Gerber H,
L, Hillan
 Gerritsen ME, G
KJ, Marsters SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NO:
Goddard A;
A, Pan J,
```

밁

S 밁 Ş

8 밁 Ş

Paoni NF

日 S 밁 Ş

```
RESULT 12
ABL88251
Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                              Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restensis; angina; rheumatoid arthritis; myocardial infarction; thrombophlebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
                                                                                                                                                                                                                                Human PRO9873 cDNA sequence SEQ ID NO:359.
                                                                                                                                                                                                                                                                                                                                         ABL88251 standard; cDNA; 521 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               atherosclerosis, hypertension, arterial restenosis, rheumatoid arthrivangine, myocardial infarctions, thrombophlebitis, lymphangitis, tumous angingenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a coding sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or anglogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Fig 359; 567pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypertrophy, trauma, cancer, age-related macular degeneration,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-171999/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152
                                                                 healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABB95602.
                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe
                                                                                                                                                                                                                                                                    (first entry)
                                                               chromosome mapping; gene mapping; gene; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76.4%;
85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Williams PM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 252.2; DB 24; Length 521; Pred. No. 1.4e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ye W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rheumatoid arthritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

Ş

밁

Homo sapiens.

Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;

```
ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to CABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, antiangiogenic, hypotensive, vulnerary and antiarteriosclerotice activities, and can be used in gene therapy. The PRO polynucleotides, proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal, e.g. cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, tymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABL88259 to ABL88267 represent primers and probes used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                Baker KP, ru-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-NOV-2000;
10-NOV-2000;
01-DEC-2000;
20-DEC-2000;
20-DEC-2000;
22-JAN-2001;
28-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-SEP-2000;
18-SEP-2000;
24-CCT-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-AUG-2000;
17-AUG-2000;
23-AUG-2000;
24-AUG-2000;
                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                          One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-MAY-2001;
25-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-FEB-2001
01-MAR-2001
                                                                                                                                                                                                                                             infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUN-2001;
                                                                                                                                                                                                                                                                                                              2002-090516/12.
                                                                                                                                                                                                                      2; Fig 359; 565pp; English.
                                                                                                                                                                                                                                                                                                                                                                                             GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                  Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001US-0816744.
2001US-0828366.
2001US-0854208.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0747259.
2000WO-US34956.
2001US-0767609.
                                                                                                                                                                                                                                                                                                                                        Watanabe
                                                                                                                                                                                                                                                                                                                                    Gurney AL, H
                                                                                                                                                                                                                                                                                                                                                                                                                      2001WO-US17800
                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WS-0870574
2001WO-US17443
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001US-0866034
2001WO-US17092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001US-0854280
2001US-0866028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001US-0802706
2001US-0808689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US06520
2001WO-US06666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001US-0796498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US30952
2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-222695P
2000US-0643657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US19692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US32678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-US23328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000WO-US20710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-219556P
                                                                                                                                                                                                                                                                                                                                     Gerber H, Gerritsen ME,
L, Hillan KJ, Marsters (
CK, Williams PM, Wood W
                                                                                                                                                                                                                                                                                                                                                    Marsters SA,
                                                                                                                                                                                                                                                                                                                                       Wood WI,
                                                                                                                                                                                                                                                                                                                                                                Goddard A;
                                                                                                                                                                                                                                                                                                                                         Ye W;
                                                                                                                                                                                                                                                                                                                                                    Pan J,
                                                                                                                                                                                                                                                                                                                                                      Paoni NF;
```

```
RESULT 13
ABK33.571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 281; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                          20-JUL-2000; 2000US-219556P.
25-JUL-2000; 2000US-220585P.
25-JUL-2000; 2000US-220605P.
25-JUL-2000; 2000US-220607P.
25-JUL-2000; 2000US-220634P.
25-JUL-2000; 2000US-220664P.
25-JUL-2000; 2000US-220666P.
25-JUL-2000; 2000US-220666P.
25-JUL-2000; 2000US-220893P.
26-JUL-2000; 2000US-220893P.
28-JUL-2000; 2000US-220893P.
                                                                                   23-AUG-2000;
24-AUG-2000;
15-SEP-2000;
10-NOV-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation; tumour necrosis factor-alpha; gene; ss.
                                                                                                                                                                                                                                                                                                                                     29-JUN-2001; 2001WO-US21066.
                                                                                                                                                                                                                                                                                                                                                                                              WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA encoding human PRO protein, Seq ID No 71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABK33571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABK33571 standard; cDNA; 521 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y Match 76.4%;
Local Similarity 85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 CCAACCACGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGGCGATGAGGAGTGTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
            2000WO-US34956.
2001WO-US06520.
2001US-0854280.
                                                                                   2000US-22060SP
2000US-22060SP
2000US-22060PP
2000US-220624P
2000US-220664P
2000US-220664P
2000US-220664P
2000US-220664P
2000WO-US20710
2000WO-US20710
2000WO-US23522
2000WO-US23528
2000WO-US23528
2000WO-US2358
                                                        2000WO-US32678.
2000US-0747259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 252.2; DB 24; Length 521; Pred. No. 1.4e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
Ś
      밁
                                                                                        片
                                                                                                                                 Ś
                                                                                                                                                                              밁
                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to one hundred and twenty two nucleic acids CC encoding PRO polypeptides. The sequences of the 122 PRO polypuctides, canced human secreted proteins. The PRO nucleic acids, polypeptides, agonists and antagonists are useful for treating a PRO related disorder. CC The PRO polypeptides are useful for diagnosing tumours, especially lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour. The PRO polypeptides are useful for stimulating the proliferation of, or gene expression, in pericyte cells, for stimulating the proliferation or differentiation of chondrocyte cells, for stimulating the proliferation of chondrocyte cells, for stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal cc weight markers and for tissue typing. The PRO mucleic acids have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABK3353-ABK33657 represent human cx xx
                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Baker KP, De
Grimaldi JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 2; Figure 71; 359pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB; AAU83627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-172001/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                y Match
Local Similarity 85.4%;
      332
                                                                                                                                                                                                       121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                           61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                          92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                     ы
                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                              GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGGGTGTGTC
TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                        GGAGAATTTTGGGCTGGCAGTTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                            AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAATGGAGCT
                                                                                                                                                                                                                                                                  TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers L,
C, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen ME, Goddard A, Godowski PJ;
Smith V, Stephan JF, Watanabe CK, Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches 48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 252.2; DB 24; Length Pred. No. 1.4e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                        331
                                                                                                                                                                            271
                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                        151
                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 14
AAH98228
ID AAH98228 standard; cDNA; 891 BP.
XX
AC AAH98228;
XX
DT 12-OCT-2001 (first entry)
XX
DE Human EST-derived coding sequence SEQ ID NO:
```

S

392

CCAACCACGGATATTGACTTCTTCTGTGA 329

```
밁
                                                                                    Ś
                                                                                                                                            Ş
                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                 밁
                                                                                                                                                                             ₽
                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; sheep; pig; cow; fruit fly; yeast; hamster; macaque; horse; tomato; monkey; dog; sea urchin; expressed sequence tag; EST; diagnostics; forensic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention provides the protein and coding sequences of novel proteins from a variety of organisms; including human, dog, cat, horse, cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (ESTs) from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess biodiversity and for nutritional purposes. The present sequence is a cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-JAN-2000; 2000US-0491404.
17-JUL-2000; 2000US-0617746.
03-AUG-2000; 2000US-0631451.
15-SEP-2000; 2000US-0663870.
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 891 BP; 272 A; 146 C; 214 G; 259 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 236; 1275pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated polypeptide for treatment of diseases, diagnostics, raising antibodies and research use -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-JAN-2001; 2001WO-US02687.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200154477-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                      the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-476164/51.
373
                          301
                                                                                    241
                                                                                                                   253
                                                                                                                                               181
                                                                                                                                                                             193
                                                                                                                                                                                                   121 GATGTCAAGAAAGGGCAGAGCTAAGTTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                        133 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGÁCTGTÁGATTCÁTT 192
                                                                                                                                                                                                                                                                                                                                                             281;
                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                                                                                                 ٢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drmanac RA,
                                                                                                                                       GAGAGITTTGGGCTGGCAGIGTTTAIGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                             AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                  CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                            CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                         TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Liu C,
                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhou
                                                                                                                                                                                                                                                                                                                                                                         76.4%;
85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ָש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qian XB,
J J, Werhn
                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                         Score 252.2; DB 2
Pred. No. 1.8e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Werhman
                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                        DB 22; Length
                                                                                                                                                                                                                                                                                                                                                           48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Asundi V;
                                                                                                                                                                                                                                                                                                                                                                                         891;
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                 312
                                                                                                                                               240
                                                                                                                                                                             252
                                                                                                                                                                                                                                                                                                                                                           0
```

RESULT 15

S 당 Ś

73

Conservative

0

Mismatches

48; Indels

<u>,</u> Gaps

0

61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120

CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC

132 60

```
Best Local Sin
Matches 281;
                                     Query Match
                                                                                                      or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRIP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                                                                                                                                                                                                                                          assembled from number 16372272 (see AAH26341). A recursive identification number 16372272 (see AAH26341). A recursive algorithm was used to extend the clone by pulling additional sequences from different databases. A full-length sequence (see AAH26343) encoding novel human growth regulatory-like polypeptide AAH26343) encoding novel human growth regulatory-like polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human growth regulatory-like polypeptide partial cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-OCT-2001
                                                                        Sequence 891 BP; 272 A; 146 C; 214 G; 259 T; 0 other;
                                                                                                                                                                                                                                                                                                                                         (GRLP, see AAB82671) was subsequently obtained. Human GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAH26342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAH26342 standard; cDNA; 891 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is that of a novel nucleic acid that was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 115; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mize NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-JAN-2000; 2000US-0491404.
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC.
                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
               76.4%; Score 252.2; DB 22; 85.4%; Pred. No. 1.8e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Έ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arterburn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MO,
                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ţ,
```

Ф	γQ	дъ	γQ	Db	Q	Db	γ	DЬ
373 CCCACGACATATTGACTTCTTCTGCGA 401	301 CCAACCACGGATATTGACTTCTTCTGTGA 329	313 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372	241 TATTTCCCCAGCAACTTGGTGAAGGAAGCAGCTGTATACCAGGAGGCCACCAAGGAGATC 300	253 GGAGAATTITGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 312	181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAATTGTAGGT 240	193 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 252	121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180	133 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGGACTGTAGATTCATT 192

Search completed: December 30, 2003, 02:14:33 Job time : 110.538 secs

```
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        December 30, 2003, 04:08:13 ; Search time 270.994 Seconds (without alignments) 4172.254 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                         2244575 segs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 catggtgtatttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                            Published_Applications_NA:*
                                                                                                                                                                                                                                                                                                         Listing first 45 summaries
GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMAR	
RIES	

15	14	13	12	11	10	9	90	7	6	v	.4	w	2	-	NO.	
252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	252.2	Score	
76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	Match)
521	521	521	521	521	521	521	521	521	521	521	521	521	521	426	Length	
13	13	13	<u>٦</u>	13	13	13	13	13	13	ដ	13	13	13	15	BIG	
US-10-219-530-71	US-10-219-526-71	US-10-219-525-71	US-10-219-483-71	US-10-219-480-71	US-10-219-475-71	US-10-219-073-71	US-10-219-069-71	US-10-219-068-71	US-10-219-067-71	US-10-219-066-71	US-10-219-063-71	US-10-218-765-71	US-10-216-163-71	US-10-216-038-1	ID	
71,	71,	•		71,	71,		71,	71,	71,	71,	•	71, App	71, App	Sequence 1, Appli	Description	

5	44	3	2	1	0	9	8	37	36	5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	T
•	•	•	•	•	•	•	•	•		•	•	•	•	252.2	•														
76.4	76.4	76.4	6	76.4	٥,	76.4		76.4	76.4	σ.	76.4	σ.	٠.	76.4	76.4	٥.	76.4	76.4	9	6	76.4	76.4	6	9	76.4	9	76.4	6	
521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	
15	15	<u>۲</u>	5	15	15	15	15	5	15	15	15	15	15	15	15	15	15	15	15	1 5	15	ր Մ	13	13	13	13	13	13	t
-10-219-468-7	-218-956	-10-216-165-7	-10-232-233-7	-10-232-231-7	-10-230-260-	-10-219-481-	19-	US-10-219-466-71	-10-219-	-10-219-	-10-219-	30-	0-219-	-10-227-	-10-2	0-218-8	-10-2	0-4	-10-218-631-	-10-230-	-10-230-163-	0-227-884-	0-223-082-3	32-228-	0-230-437-7	23-081-3	-10-219-533	0-219-532-7	10 610 011
	equence	æ	Ø	Ø	æ	O	æ	Œ		æ	Ø	Œ	æ	Sequence 71,	æ	æ	ው	Sequence 71	Ø	Sequence 7	መ	Sequence 71	æ	መ	Œ	Sequence 35	æ	Sequence 7	a
	71, Appl								71, Appl					1, Appl			-	•	•	1, Appl	•	•	9	•	•	9	-	~	•

ALIGNMENTS

US-10-216-038-1

GENERAL INFORMATION:

APPLICANT: Mize, Nancy K APPLICANT: Boyle, Bryan APPLICANT: Ford, John E

Boyle, Bryan J Ford, John E Arterburn, Matthew C Sequence 1, Application US/10216038 Publication No. US20030124573A1

```
APPLICANT: Tang, Y Tom
APPLICANT: Liu, Chenghua
APPLICANT: Drmanac, Radoje T
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANT: Song, Yong
APPLICANTON: Methods and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573A1el Growth F
ITILE OF INVENTION: Models and Materials Relating to No. US20030124573
```

밁

Ş

В Ş 망 Ş 밁 S 밁

Indels

0,

Gaps

0

331

```
US-10-216-163-71
                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/216,163
CURRENT FILING DATE: 2002-08-09
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILING DATE: 1997-10-29
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069073
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
  SEQ ID NO 71
LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 71, Application US/102 Publication No. US20030149239A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mar
                                                                                                           Remaining Prior Application data removed - NUMBER OF SEQ ID NOS: 246
                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: P3530P1C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                 OR FILING DATE: 1997-12-17
OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079294
OR FILING DATE: 1998-03-25
OR FILING DATE: 1998-03-25
OR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  313 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGGATATTGACTTCTTCTGCGA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/10216163
                                                                                                                                    See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-218-765-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 71, Application US/10218765
Publication No. US20030187201A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 281; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 76.4%;
Best Local Similarity 85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P35.00PIC.19
CURRENT APPLICATION NUMBER: US/10/218,765
CURRENT FILING DATE: 2002-08-12
RRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1907-09-17
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-18
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
                                                    PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                       OR APPLICATION NUMBER: 60/069873
OR FILING DATE: 1997-12-17
OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079294
OR APPLICATION NUMBER: 60/079656
OR APPLICATION NUMBER: 60/079656
OR FILING DATE: 1998-03-26
OR FILING DATE: 1998-03-26
APPLICATION NUMBER: 60/079728
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/081819
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212 AACGITAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76;
```

	R R R R R R R R R R R R R R R R R R R		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PPLICATI PPLICATI PPLICATI ILING DA PPLICATI ILING DA ILING DA ILING DA ILING DA PPLICATI PPLICATI PPLICATI PPLICATI OTALION ILING DA	PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI ILING DI PPLICATI	PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PPLICATION DE PLICATION DE PPLICATION DE PPL	*******************************
NUMBER 1998- NUMBER 1998- NUMBER 1998- NUMBER 1998- NUMBER 1998- NUMBER 1998- 1998-	NUMBER: 60/09854 1 1998-09-09 1 1998-09-09 1 1998-09-09 1 1998-09-10 1 1998-09-10 NUMBER: 60/09981 1 1998-09-10 NUMBER: 60/09981 1 1998-09-10 NUMBER: 60/09981 1 1998-09-10 NUMBER: 60/09981 1 1998-09-11 NUMBER: 60/1003 1 1998-09-15 NUMBER: 60/1003	1998-06-25 1998-06-25 1998-07-07 NUMBER: 60/09530 1998-08-04 1998-08-04 NUMBER: 60/09591 1998-08-10 NUMBER: 60/09614 1998-08-11 NUMBER: 60/09679 NUMBER: 60/09679 NUMBER: 60/09798	1998- 1998-

PRIOR APPLICATION NUMBER: 60/101786
PRIOR FILING DATE: 1998-09-24
PRIOR ETLING DATE: 1998-09-24
PRIOR ETLING DATE: 1998-09-24
PRIOR APPLICATION NUMBER: 60/10192
PRIOR APPLICATION NUMBER: 60/106248
PRIOR FILING DATE: 1998-10-28
PRIOR APPLICATION NUMBER: 60/106248
PRIOR FILING DATE: 1998-10-29
PRIOR APPLICATION NUMBER: 60/106464
PRIOR APPLICATION NUMBER: 60/106905
PRIOR APPLICATION NUMBER: 60/106905
PRIOR FILING DATE: 1999-10-29
PRIOR PRIOR PRILING DATE: 1999-11-17
PRIOR FILING DATE: 1999-11-17
PRIOR PRILING DATE: 1999-11-17
PRIOR PRILING DATE: 1999-11-17
PRIOR PRILING DATE: 1999-11-17
PRIOR APPLICATION NUMBER: 60/108801
PRIOR PRILING DATE: 1999-11-17
PRIOR PRILING DATE: 1999-11-17
PRIOR PRILING DATE: 1999-11-17
PRIOR APPLICATION NUMBER: 60/113296
PRIOR FILING DATE: 1999-11-17
PRIOR PRILING DATE: 1999-11-17
PRIOR APPLICATION NUMBER: 60/113296
PRIOR APPLICATION NUMBER: 60/113296
PRIOR PRILING DATE: 1999-11-22
PRIOR APPLICATION NUMBER: 60/113296
PRIOR PRILING DATE: 1999-11-23
PRIOR PRILING DATE: 1999-11-22
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR APPLICATION NUMBER: 60/11556
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-12
PRIOR PRILING DATE: 1999-01-26
PRIOR PRILING DATE: 1999-01-26
PRIOR PRILING DATE: 1999-01-26
PRIOR PRILING DATE: 1999-01-26
PRIOR PRILING DATE: 1999-01-26
PRIOR PRILING DATE: 1999-01-26
PRIOR PRILING DATE: 1999-01-26
P

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
           CURRENT APPLICATION NUMBER: US/10/219,063
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, K
APPLICANT: Desnoye
APPLICANT: Gerrits
APPLICANT: Goddward
APPLICANT: Goddward
APPLICANT: Goddward
APPLICANT: Gurney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 71, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                   APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OR FILING DATE: 1999-108-31
OR APPLICATION NUMBER: 60/164418
OR APPLICATION NUMBER: 60/164418
OR FILING DATE: 1999-11-09
OR APPLICATION NUMBER: 60/166361
OR FILING DATE: 1999-11-16
OR APPLICATION NUMBER: 60/169445
OR APPLICATION NUMBER: 60/16945
OR FILING DATE: 1999-12-07
OR APPLICATION NUMBER: 60/169495
OR FILING DATE: 1999-12-07
OR APPLICATION NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1999-08-17
APPLICATION NUMBER: 60/149638
FILING DATE: 1999-08-17
FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 76.4%; Score 252.2; DB 13; Length 521; Similarity 85.4%; Pred. No. 1.2e-76; 81; Conservative 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACTATTTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10219063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US20030187202A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
Ş
                                                                                                                                 Ś
                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                            В
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - See File Wrapper or PALM
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 281; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: Homo Sapien
                                                                                                                                                                                       272
                                                                                                                                                                                                                                   181
                                         301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                121 GATGTCAAGAAAGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                    212 AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                           GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76.4%; Score 252.2; DB 13; Length 521; 85.4%; Pred. No. 1.2e-76; ative 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151
                                                                                                                                                                                                                                                                                    271
                                                                                                                                                                                         331
```

```
RESULT 5
US-10-219-066-71

Sequence 71, Application US/10219066

Publication No. US20030187203A1

GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Coddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
CURRENT FILING DATE: 2002-08-13
APRIOR APPLICATION NUMBER: US/10/219,066
CURRENT FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
```

AND NUCLEIC

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo Sapien US-10-219-066-71
                                                                                                                                                                                         APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
APPLICANT: Grimaldi, J. Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/662287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                              Sequence 71, Application US/10219067 Publication No. US20030187204A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/069873
PRIOR TILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER: OF SEQ ID NOS: 246
             APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
REFERENCE: P3530P1C51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392 CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h 76.4%;
Similarity 85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTC
                                                                                                                                        Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                           Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76; 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211
```

```
밁
                                                                                                                                                               S
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246 SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-10-28 PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           / Match 76.4%; Score 252.2; DB 13; Length 521; Local Similarity 85.4%; Pred. No. 1.2e-76; les 281; Conservative 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1997-12-17
                            301 CCAACCACGGATATTGACTTCTTCTGTGA 329
  392
                                                                                                              332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                             241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                            272 GGÁGAATTTTGGGCTGGCAGTGTTTÁTGGTGÁTGGCCÁGGACGAGATGGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                 181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                          212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                               121 GATGTCAAGAAAGGGCAGCAGCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                     152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 TATACTATTTCTCTGGCAAGAGACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
WS-10-219-068-71

US-10-219-068-71

Sequence 71, Application US/10219068

Publication No. US20030187205A1

GENERAL INFORMATION:

APPLICANT: Baker, Kevin P.

APPLICANT: Desnoyers, Luc

APPLICANT: Gerritsen, Mary

APPLICANT: Goddard, Audrey

APPLICANT: Goddwski, Paul J.

APPLICANT: Gormaldi, J. Christopher

APPLICANT: Gurney, Austin L.

APPLICANT: Smith, Victoria

APPLICANT: Stephan, Jean-Philippe F.
```

```
US-10-219-069-71
Sequence 71, Application US/10219069
Publication No. US20030187206A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                      RESULT 8
                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/079910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/069113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Homo Sapien
-10-219-068-71
  APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
APPLICANT: Goddard, Audre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C31
CURRENT APPLICATION NUMBER: US/10/219,068
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-10-31
APPLICATION NUMBER: 60/069873
FILING DATE: 1997-12-17
APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                    332
                                                                                                                                                                                                                                                           392
                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                             272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 76.4%; Score 252.2; DB 13; Length 521; Similarity 85.4%; Pred. No. 1.2e-76; 81; Conservative 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                           CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACGTTAAAAAAGGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watanabe, Colin L. Wood, William I.
                     Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
; TYPE: DNA; Homo Sapien; ORGANISM: Homo Sapien US-10-219-069-71
                                Ś
                                                                                밁
                                                                                                                      ঠ
                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246 SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME PILE REFERENCE: P3530P1C40 CURRENT APPLICATION NUMBER: US/10/219,069 CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/079294 PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/079728
                                                                                332
                                                                                                                                                                 272
392
                                       301
                                                                                                                                                                                                         181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                       121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                     152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT
                                                                                                                        241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                    212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                  61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281;
                                                                                                                                                                                                                                                                                                                                                                                                                      92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGA 329
CCCACCACGATATTGACTTCTTCTGCGA
                                                                                TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Grimaldi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76.4%; Score 252.2; DB 13; 85.4%; Pred. No. 1.2e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                   391
                                                                                                                                                                                                                                                       271
                                                                                                                                                                                                                                                                                                                                                                                                                           151
                                                                                                                                                                    331
                                                                                                                                                                                                                                                                                                                                          211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
```

US-10-219-073-71

Sequence 71, Application US/10219073 Publication No. US20030187207A1

```
밁
                                                                                                                                                                                               B
                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILLING DATE: 2002-04-09
PRIOR FILLING DATE: 1997-09-17
PRIOR FILLING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILLING DATE: 1997-10-17
PRIOR FILLING DATE: 1997-10-28
PRIOR FILLING DATE: 1997-10-28
PRIOR FILLING DATE: 1997-10-28
PRIOR FILLING DATE: 1997-10-28
PRIOR FILLING DATE: 1997-10-31
PRIOR FILLING DATE: 1997-10-31
PRIOR FILLING DATE: 1997-10-31
PRIOR FILLING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C52
CURRENT APPLICATION NUMBER: US/10/219,073
CURRENT FILING DATE: 2002-08-14
CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Homo Sapien
392
                         301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                 272 GGAGAATTTTGGGCTGGCAGTGTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                              181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                 212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                     121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                  TATTICCCCAGGAACTIGGICAAGGAACAGCGIGIGIACCAGGAAGCIACCAAGGAAGII 391
                                                                                                                           TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76; 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                    331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
HAPPLICANT: WOOD, WILLIAM I.

TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME

FILE REFERENCE: P3530P1C49

CURRENT FLILING DATE: 2002-08-13

PRIOR APPLICATION NUMBER: US/10/219,475

CURRENT FILING DATE: 2002-08-13

PRIOR APPLICATION NUMBER: 60/05913

PRIOR FILING DATE: 1997-09-17

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/063549

PRIOR APPLICATION NUMBER: 60/063549

PRIOR APPLICATION NUMBER: 60/063549

PRIOR APPLICATION NUMBER: 60/064103

PRIOR APPLICATION NUMBER: 60/064103

PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-219-475-71
Ś
                                                          밁
                                                                                                      Ś
                                                                                                                                                         묽
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-475-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed -
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, I
APPLICANT: Desnoye
APPLICANT: Gerrits
APPLICANT: Goddax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 71, Application US/10219475
Publication No. US20030187208A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 281; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
     241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                               181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                           121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                             152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                             61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                 92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                 1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGGGGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                           AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76.4%; Score 252.2; DB 13; Length 85.4%; Pred. No. 1.2e-76; Live 0; Mismatches 48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                            331
                                                                                                                                                                271
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-480-71
                                                        밁
                                                                                          Ş
                                                                                                                                   밁
                                                                                                                                                                    Ş
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                           ; TYPE: DNA; ORGANISM: Homo Sapien US-10-219-480-71
                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILLING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILLING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR TILLING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR TILLING DATE: 1998-03-26
PRIOR TILLING DATE: 1998-03-26
PRIOR TILLING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 71, Appublication No.
                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/219,480 CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: WOOd, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMERANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C38
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: PRIOR APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/069873 FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/063549 FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/062287 FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/059113
FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-03-26
APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        392 CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                            121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                   152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                     181
                                                                                                                                                                      61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                           92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                      281; Conservative
                                                                                                                                                                                                                                               CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219480
GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                          PACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAAGGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan, Jean-Philippe F. Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US20030187209A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Austin L.
                                                                                                                                                                                                                                                                                                        76.4%;
85.4%;
                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                          Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76;
                                                                                                                                                                                                                                                                                        48;
                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                            o
;-
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                     180
                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                              0
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
                                                                                                                                                                                                                                                                                            ; TYPE: DNA; Homo Sapien; ORGANISM: Homo Sapien US-10-219-483-71
S
                                        밁
                                                                               Ś
                                                                                                                             밁
                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 71, App
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                          Matches 281; Conservative
                                                                                                                                                                                                                                Query Match 76.4%;
Best Local Similarity 85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/059113 PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: P3530P1C43
CURRENT APPLICATION NUMBER: US/10/219,483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/064103 PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                        LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 CCAACCACGGATATTGACTTCTTCTGTGA 329
121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                               61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                          92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/10219483
70. US20030187210A1
                                           TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002-08-13
                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76;
                                                                                                                                                                                                                   48;
                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                   Gaps
                                                                                                                                                                              60
                                                                                                                                                                                                                       0
```

```
Sequence 71, Application US/10219525
Publication No. US20030187211A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
밁
                                                                                                                                                                                         ; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1998-10-32
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/07924
PRIOR APPLICATION NUMBER: 60/07926
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCCACCAAGGAGGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272 GGAGAATTTTGGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92
                           h 76.4%;
Similarity 85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAACCACGGATATIGACTTCTTCTGTGA 329
CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith, Victoria
                                                                                                  Conservative
                                                                                            Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76; 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
                                                                                                    0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-219-526-71
                                                                                                  US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 71, Application US/10219526
Publication No. US20030187212A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
                                                                                                                                                                    SEQ ID NO 71
LENGTH: 521
                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C41
CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: US/19,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR PILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1370 TO 7079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                     Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/064103 PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1997-10-28
                                                                                                                    TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TATACTATTTCTCTGGCAAGAGCACAGAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
Gerritsen, Mary
                         76.4%;
85.4%;
Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76; 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271
```

Matches 281;

Conservative

Gaps

0

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                           CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR PILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 71, Application US/10219530 Publication No. US20030187213A1
                                           PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PREMAINING PRIOR Application data removed -
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
ENOTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, APPLICANT: Desnoy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: P3530P1C54
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212 AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        татттессскаесласттествалевлеслесствтатасслевлевсесслевлевленте зоо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney, Austin L. smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F. Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kevin P.
                                                                                                                                              See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          271
```

```
밁
                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-530-71
                            Ś
                                                                                                 Ś
                                                                                                                                                                    Ś
                                                                                                                                                                                                                                       Ś
                                                                 밁
                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 281; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 76.4%;
Best Local Similarity 85.4%;
                                                                                                 241 TATTTCCCCAGCAACTTGGTGAAGGAGCCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                       272
                                                                                                                                                                   181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                         212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                         121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                             152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
392
                                301
                                                                                                                                                                                                                                                                                                     61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                92 cárgeaaratritárgeaccgretagetriccaaeaácaecteterecaeatrateateaetere
                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                      GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                CCAACCACGGATATTGACTTCTTCTGTGA 329
CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 252.2; DB 13; Length 521; Pred. No. 1.2e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                             48;
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                   271
                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                        211
                                                                                                                                                                                                                                                                                                                                                           151
                                                                                                                                                                                                                                                                                                                                                                                              60
```

Search completed: December 30, 2003, 10:03:03 Job time : 271.994 secs

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
a
                                                               a
                                                                                                              00000000
                                                                                                                                                                                                                                                                                 იი
 pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB seq length: 0
DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 catggtgtatttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-25
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December 30, 2003, 01:34:27; Search time 26.6527 Seconds (without alignments) 5464.987 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1: /sgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/ETUS COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      569978 segs, 220691566 residues
 Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
7 4581
7 335
7 335
7 335
8 355
8 20 5825
9 8022
1 1109
1 1109
1 11109
1 17312
1 1748
1 1748
1 1748
1 1748
1 1748
1 1748
1 1748
                             US-08-578-649-4
US-08-578-649-1
US-08-578-649-1
US-08-578-649-24
US-08-578-649-24
US-08-578-649-24
US-09-298-731-35
US-09-298-731-35
US-09-298-731-35
US-09-298-731-35
US-09-298-731-35
US-09-298-731-35
US-09-298-555-4
US-09-298-651-3
US-09-088-651-3
US-09-088-651-1
US-09-088-651-1
US-09-088-651-1
US-09-088-651-1
US-09-088-651-1
US-09-186-653A-1
US-09-386-653A-1
 US-08-687-080-105
                  PCT-US95-16216-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
            Sequence 4, Appli
Sequence 1, Appli
Sequence 8, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 30, Appli
Sequence 30, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 231, App
Sequence 223, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
 Sequence
 2, Aj
2, Aj
105,
```

	- α α	0000
SEQUILT 1 SEQUILT 1 SEQUIL 1 SEQU	8884444 7880113845	8 9 0 4 3 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
US-08-578-649-4 US-08-578-649-4 US-08-578-649-4 PSQUENCE 4, Application US/08578649 Patent No. 5770366 GENERAL INFORMATION: APPLICANT: Ulrich Bogdan APPLICANT: Brigitte Kaluza TITLE OF INVENTION: MELANOMA-INHIB: NUMBER OF SEQUENCES: 24 CORRESPONDENCE ADDRESS: ADDRESSEE: Felfe & Lynch STREET: New York COUNTRY: USA ZIP: 10022 COMPUTER READABLE FORM: MEDDIM TYPE: 3.5 inch 1.44 Mb st. COMPUTER: IBM PS/2 OPERATING SYSTEM: PC-DOS SOFTWARE: WORDPEFECT CURRENT APPLICATION DATA: APPLICATION UNMBER: US/08/578,64: FILING DATE: 29-Uuly-1994 CLASSIFICATION UNMBER: US/08/578,64: APPLICATION UNMBER: US/08/578,64: APPLICATION UNMBER: US/08/578,64: APPLICATION UNMBER: DE P 43 24 2 FILING DATE: 29-Uuly-1994 CLASSIFICATION UNMBER: US/08/578,64: APPLICATION UNMBER	00000000000000000000000000000000000000	
NATION: WATTON: Ulifor Reinhar Bright Reinhar Bright Reinhar Bright Reinhar Bright Reinhar Bright Reinhar R		400000000
N. Con DATA: UNDER: 13.5 inch MADDRESS: ADDRESS: UNDER:	1878 1878 1878 1878 1878 1878 1878 2938	36412 1500 1620 2800 2800 2800 2800 1425 1878
)85786 1 1 1 1 1 1 1 1 1 1 1 1 1	3 US 4 US 4 US 3 US 3 US 3 US	3 US-
INHIBITING INHIBITING 78,649 DER 1035-PF	-08-995-659 -09-215-649 -09-577-800 -09-577-800 -09-871-860 -09-871-291 -08-969-815 -09-120-025 ALIGNMENTS	08-31 09-25 09-25 09-25 09-26 09-26 09-26
en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	5-659- 7-780- 7-800- 6-496- 1-856- 1-291- 9-815- 0-025-	1-731A-1 2-991A-4 2-991A-4 4-918-35 5-315-35 5-315-35 5-315-35 5-932A-2
PROTEIN diskette	3 4 4 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1	-132 -4920 35 35 35 35 36 37 -200
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
	squence squence capence capence capence cquence cquence	Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence
		132 4920 4920 35, 22 200, 20 200, 20 44, 44
	90000000000000000000000000000000000000	Appl Appl Appl Appl Appl Appl Appl Appl

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-578-649-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 19.7%; Bes: Local Similarity 54.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Applic Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                           FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajolof:
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER
TELECOMMUNICATION INFORMATION:
                                                       TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brightte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
SEQUENCE CHARACTERISTICS:
LENGTH: 459 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                        FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                    SOFTWARE: Wordperiect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
LOCATION:
                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           175 TGATCGAGCTATGCCCAAGCTGGCTGACTGGAAGCTGTGTGCGGACGAGGAATGCAGCCA 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123 ТСТСААСАААССЕСАССАСАТСТАТСТТТАСТССААССТССТВАССАСАААААСССАССТСС 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183 AGAGTITTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGA---ATTGTAGG 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235 TCCTATCTCCATGGCTGTGGCCCTCCAGGACTACGTGGCCCCTGATTGCCGCTTCTTGAC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300 CCCAACCACGGATATTGACTTCTTCTG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63 TACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGA 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  w
                                                                                                                                                                                                                                                                                                                                                                                                                                10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTATTTCCCCAGTAGCATTGTCCGGGAGGACCTGAACTCGAAACCTGGCAAAATTGATAT 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTTTTCTGGGGAGGCAGTGTTCAGGGAGGTTACTATGGAGACCTGGCAGCCCGCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08578649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGACCGATCAATGGGATTTCTACTG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTATTTCCCCAGCAACTIGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGAT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATATATAGGGGCCAAGTGGTGTATGTCTTCTCCAAGTTG-----AAGGGCCGTGGGCG 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                  Wordperfect
                                                                                                                                                                                                                                                                                                                                                                            IBM PS/2
                                                                                             (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                               3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 65; DB 1; Length 581; Pred. No. 9.6e-12; 0; Mismatches 140; Indels
                                                                                                                                      BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
```

```
US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 154; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: cDNA FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                          124 GTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGA 183
                                                                                                                                                                                                                                                   169 CCTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCGACTGCCGATTCCTGACC 228
                                                                                                                                                                                                                                                                                                                                   109 GETGETCCTATECCCAAGETGGETGACCGGAAGETGTGTGCGGACCAGGAGTGCAGCCAC 168
                                    241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGC 271
                                                                              283 CTCTTCTGGGGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGC 342
                                                                                                                     184 GAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATT---GTAGGT 240
                                                                                                                                                                229 ATTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGG 282
343 TATTTCCCCAGTAGCATTGTCCGAGAGGACC 373
                                                                                                                                                                                                                                                                                          64 ACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGAT 123
                                                                                                                                                                                                                                                                                                                                                                          4 GGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTAT 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mat_peptide
112..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                           18.2%; Score 60.2; DB 1; 56.8%; Pred. No. 3.2e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches 108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 459;
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                   2
```

US-08-578-649-18 Patent No. 5770366 Sequence 18, GENERAL INFORMATION: APPLICANT: Ulrich Boyun.
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
ADDRESSEE: Felfe & Lynch ZIP: 10022 COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: DOER 1035-PI CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 29-July-1 TELECOMMUNICATION INFORMATION: OPERATING SYSTEM: PC-DOS SOFTWARE: Wordperfect CLASSIFICATION: 435 SOFTWARE: COMPUTER: COUNTRY: CITY: New York New York Application US/08578649 USA IBM PS/2 3.5 inch 1.44 Mb storage diskette 29-July-1994 US/08/578,649 BOER 1035-PFF/ALT

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 330 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Applic
Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE
                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: CDNA
                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
COMPUTER: IBM PS/2
FILING DATE: 20-July-1993 ATTORNEY/AGENT INFORMATION:
                                      CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
                                                                                          SOFTWARE: Wordperfect
CURENT APPLICATION DATA:
APPLICATION UMBER: US/08/578,649
FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: 4..6 OTHER INFORMATION: /function= "Startcodon Met"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                               COMPUTER: IBM PS/:
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATT----GTA 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 ACCATTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CACCCTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                  New York
                                                                                                                                                                                                                                              10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTATTTCCCCAGTAGCATTGTCCGAGAGGACC 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTTATTTCCCCAGCAACTTGGTGAAGGAGCAGC 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATATGGGACCAATGCCAAAATTAGCAGATCGTAAATTATGTGCAGATCAGGAGTGCAGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08578649
                                                                                                                                                                                                                                                                                 New York
                                                                                                                                                                                                                                                                                                                       805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mat_peptide 7..327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_RNA
                                                                                                                                                                                                                                                                                                                                         Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16.7%;
                                                                                                                                                                     PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 55.2; DB 1; Length 3: Pred. No. 1.2e-08; O; Mismatches 113; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
```

```
; LOCATION: join(1..29, 277..305); OTHER INFORMATION: /function= "Primer" US-08-578-649-8
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEPAX: (212) 638-3884
INFORMATION FOR SEQ ID NO: 8:
                                                                                                                   Ś
                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                S
US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 305 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                241 C 241
                                                                                                                       271 C 271
                                                                                                                                                            181 TACTATGGAGATCTGGTCGCCTCGCCTGGGCTATTTCCCCCAGTAGCATTGTCCCGAGAGGAC 240
                                                                                                                                                                                                 214 CACCAGGATGAGATGGGAATT---GTAGGTTATTTCCCCCAGCAACTTGGTGAAGGAGCAG 270
                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                154 TCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTTGGGCTGGCAGTGTTTATGGTGAC 213
                                                                                                                                                                                                                                                                                                                                                                                                                                          34 AAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAAGAT 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     138;
                                                                                                                                                                                                                                                                                                                         67 TACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTC
                                                                                                                                                                                                                                                                                                                                                                94 TAÇAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTTTAC 153
                                                                                                                                                                                                                                                                                                                                                                                                       7 AAGTTTTCGGCGGATCAGGAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCTTCAGGAC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                               TCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTGGGGAGGCAGCGTTCAGGGAGAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 52.6; DB 1;
Pred. No. 8.3e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

Sequence 24, Application US/08578649 Patent No. 5770366 GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-UN1Y-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: DE P 43 24 247.2
FILING DATE: 20-UN1Y-1993 COMPUTER READABLE FORM: CORRESPONDENCE ADDRESS: NUMBER OF SEQUENCES: COMPUTER: IBM PS/ OPERATING SYSTEM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette COMPUTER: IBM PS/2 STREET: 805 Th CITY: New York STATE: COUNTRY: ADDRESSEE: 1002 New York E: Felfe & Lynch 805 Third Avenue USA PC-DOS 24

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-578-649-24
                                                                                                                                                                                                                                                                                                      US-08-578-649-3
                                                                                                                                                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 59; Conserv
                                                                                                                                                                                                                                                                 Sequence 3, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
LENGTH: 596 base pairs
                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEPAX: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajolof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 596 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
LOCATION: one-of(194, 369, 527)
LOCATION: one-of(194, 369, 527)
OTHER INFORMATION: /note= "N in positions 194, 369
OTHER INFORMATION: and 527 denotes an indefinite number and sequence
OTHER INFORMATION: of nucleotides "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
                                                                    STATE:
                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION:
                                                 COUNTRY:
                                                                                      CITY: New York
                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                             217 CTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCGACTGCCGATTCCTGACCA 276
                                                                                                                                                                                                                                                                                                                                                                                                            125 TCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTG 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 CTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATG 124
                                 10022
                                                                                                                                                                                                                                                                                                                                                                         TTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG 314
                                                                    New York
                                                                                                       E: Felfe & Lynch
805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
549..569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
214..347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..569)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sig_peptide
40..111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   join(40..111, 40..166, 214..347, 393..503, 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40..166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      393..503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tiajoloff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.8%; Score 35.6; DB 1; Length 596; 60.2%; Pred. No. 0.043; tive 0; Mismatches 39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
Ś
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                    ş
GENERAL INFORMATION:
APPLICANT: Rhodes, Kenneth
APPLICANT: Betty, Maria
APPLICANT: Ling, Huai-Ping
APPLICANT: Ling, Huai-Ping
APPLICANT: An, Wengian
TITLE OF INVENTION: POTASSIUM CHANNEL INTERACTORS AND USES THEREFOR
FILE REFERENCE: MNI-070CP2
CURRENT APPLICATION NUMBER: US/09/399,913
CURRENT FILING DATE: 1999-09-21
                                                                                                                                                                                              US-09-399-913-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-578-649-3
                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                        Sequence 35, Application US/09399913 Patent No. 6361971
                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (212) 838-388
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 3565 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BO
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
LOCATION: one-of(2216)
OTHER INFORMATION: /not
OTHER INFORMATION: deno
OTHER INFORMATION: nucl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: DE P 43 24 247.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                   1589 CTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCGACTGCCGATTCCTGACCA 1648
                                                                                                                                                                                                                                                                  1649 TTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG 1686
                                                                                                                                                                                                                                                                                                   125 TCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTG 162
                                                                                                                                                                                                                                                                                                                                                                    65 CTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATG 124
                                                                                                                                                                                                                                                                                                                                                                                                          59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sig_peptide
1378..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
3232..3252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2804..2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1586..1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
1378..1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                          10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "N in position 2216
denotes an indefinite number ans sequence of
nucleotides"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                        Score 35.6; DB 1; Length 3565; Pred. No. 0.1;
                                                                                                                                                                                                                                                                                                                                                                                                              ; 65
                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; NAME/KEY: CDS
; LOCATION: (49)..(816)
US-09-399-913-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EARLIER APPLICATION NUMBER: USSN 60/110,277
EARLIER FILING DATE: 1998-11-30
EARLIER APPLICATION NUMBER: USSN 60/110,033
EARLIER FILING DATE: 1998-11-25
EARLIER APPLICATION NUMBER: USSN 60/109,333
EARLIER FILING DATE: 1998-11-20
EARLIER APPLICATION NUMBER: USSN 09/298,731
EARLIER FILING DATE: 1999-04-23
EARLIER APPLICATION NUMBER: USSN 09/350,614
EARLIER APPLICATION NUMBER: USSN 09/350,614
EARLIER APPLICATION NUMBER: USSN 09/350,614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
밁
                                            Ś
                                                                                                                                                                                           ; NAME/KEY: CDS
; LOCATION: (49)..(816)
US-09-298-731-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-298-731-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 35, Application US/09298731
Patent No. 6369197
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 10.4%; Score 34.4; DB 4; Length 2644; Best Local Similarity 52.1%; Pred. No. 0.22; Matches 100; Conservative 0; Mismatches 91; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 35
                                                                                              Matches 100;
                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Pa
                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EARLIER APPLICATION NUMBER: USSN 09/350,874
EARLIER FILING DATE: 1999-07-09
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/298,731
CURRENT FILING DATE: 1999-04-23
NUMBER OF SEQ ID NOS: 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: MNI-070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: KENNETH RHODES, MARIA BETTY, HUAI-PING LING, AND FRANK AN TITLE OF INVENTION: POTASSIUM CHANNEL INTERACTORS AND USES THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: Mus musculus FEATURE:
                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH: 2644
                                                                                                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                Match 10.4%;
Local Similarity 52.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1940 GGATTGAAGGCCACTGTTAACCCTAAGCTGGAGCCTAGCCCTGAGGGCTGGGGACCTGTGA 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2119 GTACATTCCATC 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2059 CTCGCCCAGAAGGAACAGTGTCCCAAGAAGCATGTTTCCTGGAGGAACATCCCCCACAAAA 2118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000 CCAGGCAACAGGTCAGCAGACCCTCAGGAGGAGA-GAGAGCTGTTCCTGCCTCCCCAGGC
1940 GGATTGAAGGCCACTGTTAACCCTAAGCTGGAGCCTAGCCCTGAGGGCTGGGGACCTGTGA 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     133 GGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGG 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                313 ATTGACTTCTTC 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            253 AAÇTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGGAGATCCCCAACCACGGAT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193 GCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCCAGC 252
                                               133 GGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGG 192
                                                                                                                                                                                                                                                                                                                                            2644
                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Ver. 2.0
                                                                                              Conservative
                                                                                              0; Mismatches
                                                                                                                     Score 34.4; DB 4; Length 2644; Pred. No. 0.22;
                                                                                              91;
                                                                                                 Indels
                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                 Gaps
```

8 8 8 8

91 GATTACAATGCCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCCAGCAGATCTATGTT 150

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-232-463-14/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Sequence 14, Application US/08232463 ; Patent No. 5670367
                                                                                                                          ; CLONE: p'
US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: EP 91 114 300.6
APPLICATION NUMBER: EP 91 114 300.6
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 30472/114 IM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
                                          Matches
                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                             TELEX: 899149
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: SCHEIFLINGER, F. G.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                   IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 1800 pray
CITY: Alexandria
                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                    TELEFAX:
                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2059 CTCGCCCAGAAGGAACAGTGTCCCAAGAAGCATGTTTCCTGGAGGAACATCCCCACAAAA 2118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000 CCAGGCAACAGGTCAGCAGACCCTCAGGAGGAGA-GAGAGCTGTTCCTGCCTCCCAGGC 2058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          313 ATTGACTTCTTC 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          253 AACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCCAACCACGGAT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193 GCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGC 252
31 AAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAA 90
                                          8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTACATTCCATC 2130
                                                                                                                                             pTZgpt-F1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Foley & Lardner
1800 Diagonal Road, Suite 500
                                                                                                                                                                                                                                                    7218 base pairs
                                                                                                                                                                                                                                                                                                                                    (703)683-4109
                                        10.4%; Score 34.4; DB 1; Length 7218; ilarity 2.9%; Pred. No. 0.35; Conservative 157; Mismatches 113; Indels 0; Gaps
                                                                                                                                                                                        linear
                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/232,463
                                                                                                                                                                                                                                                                                               14:
                                                                                                                                                                                                                                                                                                                                                                                                      30472/114 IMMU
                                                                                 DB 1; Length 7218;
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-899-595-4/c
                                                                                                        US-08-899-595-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/08899595
Patent No. 6111072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                 Query Match 9.9%;
Best Local Similarity 48.6%;
                                  Matches
                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Narumiya, Shuh
APPLICANT: Takahashi, No. 6111072uaki
TITLE OF INVENTION: RHO TARGET PROTEIN HUMAN MDIA AND GENE
TITLE OF INVENTION: ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 26-AUG-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 9-90170
FILING DATE: 25-MAR-1997
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                        NAME: Stephen A. Bent
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 049441/0112
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)672-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                           TOPOLOGY: line
MOLECULE TYPE: 0
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 24 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/899,595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: JP 8-242701 FILING DATE: 26-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                           NAME/KEY:
                                                                                                                                                                            ORGANISM:
                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                        TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1093 RRRRRRRRRRRRRRRRRRRRRRRRRRATCGCAAGCTC 1056
                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151 TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGGGCTGGCAGTGTTTATGGT 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   211 GACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCCAGCAACTTGGTGAAGGAGCAG 270
114 GTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAA 173
                                  89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20007-5109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCAC 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D. 0
                                                                                                                                                                                                                                                                 : 5822 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                           904136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Foley & Lardner
3000 K Street, N.W., Suite 500
                                                                                                                                                                                                                                                                                                                                                         (202) 672-5399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                    Conservative
                                                                                                                                                                                Human
                                                                                                                         28..3972
                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-JUL-1997
                                                                                                                                                                                                                 cDNA to mRNA
                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                            4.
                                      0;
                                  Score 32.6; DB 3;
Pred. No. 1.2;
0; Mismatches 94;
                                          94; Indels
                                                                         Length 5822;
                                          0,
```

Ś

Ś

114 GTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAA 173

```
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-899-595-5
                                                                 US-08-899-595-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 5, Application US/08899595
Patent No. 6111072
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
              Best Local Similarity
                                 Query Match
                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                MOLECULE TYPE: C
ANTI-SENSE: YES
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/899,595
FILING DATE: 24-JUL-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Narumiya, Shuh
APPLICANT: Takahashi, No. 6111072uaki
TITLE OF INVENTION: RHO TARGET PROTEII
TITLE OF INVENTION: ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 04:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)672-5300
                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 26-AUG-
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 25-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                            NAME: Stephen A. Bent REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: JP 8-242701 FILING DATE: 26-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                   STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                            TELEX:
                                                                                                                                                                                                                                                                          TELEFAX:
                                                                                   ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1946 GGAÁTAATÁGTGCCAGÁGTCÁCCAGGTAÁAGGÁGGGGÁAGGGGAACÁGGÁGCACGACTÁ 1887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2066 GTACCTCCAGGTAAAGAAGGGGGTGAGGAGATGCAAACACCCCCAGGCAAAGGAGGTGGA 2007
                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1886 GGA 1884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 созадствоадастттвоестевсастеттатествассассасватвасатесват 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            234 TGTAGGTTATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAA 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294 GGA 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20007-5109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.0
                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                            90413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3000 K Street, N.W., Suite 500
                                                                                                                                                                                                          5822 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                              (202) 672-5399
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Foley & Lardner
                                                                                     Human
                                                                                                                       YES
                                                                                                                                       cDNA to mRNA
                9.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                   JP 9-90170
                                                                                                                                                                                                                                              <u>ن</u>
   0,
                                                                                                                                                                                                                                                                                                                                 049441/0112
                 Score 32.6; DB 3; Length 5822; Pred. No. 1.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROTEIN HUMAN MDIA AND GENE
   Mismatches
     94; Indels
       <u>.</u>
        Gaps
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-734-674-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: n = A, T, C or G US-09-734-674-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                         US-09-280-116-57/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/09734674 Patent No. 6498022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 3
           Sequence 57, Application US/09280116A

Sequence 57, Application US/09280116A

Patent No. 6331427

PATENT: RObisson, Keith E.
APPLICANT: RObisson, Keith E.
APPLICANT: RObisson, Keith E.
TITLE OF INVENTION: Nucleic Acid Molecules Encoding Human Protease Homologs
TITLE REFERENCE: 5800-24, 035800/176955

FILE REFERENCE: 5800-24, 035800/176955

FULTE REPETION: NUMBER: US/09/280,116A

CURRENT FILING DATE: 1999-03-26

NUMBER OF SEQ ID NOS: 268

SOPTWARE: PATENTIN Ver. 2.0

SEQ ID NO 57

LENGTH: 654

TYPE: DNA

TYPE: DNA

TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: WEI, Ming-Hui et al
TITLE OF INVENTION: ISOLATED HUMAN TRANSPORTER PROTEINS,
TITLE OF INVENTION: NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: CLOOlol8
CURRENT APPLICATION NUMBER: US/09/734,674
CURRENT FILING DATE: 2000-12-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature LOCATION: (1)...(20200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                               183529 AGTCCAGGAATCCCAATGTTGAGGGGCAAATAAAGGAAGAGATTG 183573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183469 GRAAGTCAAAGCCATGGGTATGGATGAACTATTCCAGGAGAAAAGAAAACAGAGAATGAG 183528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183409 CTAGAACTCAGGAGAGAGCTAAGGCAGAGACGTAGGTCCGTGAATCATTAGCAAGTCTGT 183468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3757 GTACCTCCAGGTAAAGAAGGGGGTGAGGAGATGCAAACACCCCCAGGCAAAGGAGGTGGA 3816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3817 GGAGGAGGAGGAGGAGGAGGAGGAGGAGTAGTATCCCCAGGAGCAGGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3877 GGAÁTAATAGTGCCAGAGTCACCAGGTAÁÁGGÁGGGCAGGGGGÁACÁGGÁGCACGACTÁ 3936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3937 GGA 3939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174 CGGAGCTGGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAT 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   234 готаностратутскоскан картинентару 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                               185 AGITTIGGGCIGGCAGIGITTATGGTGACCACCAGGATGAGATGG 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125 TCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAG 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 CTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATG 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (202001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 32.2; DI
Pred. No. 8.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4; Length 202001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
```

```
; OTHER INFORMATION: trypsin-like serine proteases US-09-280-116-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-088-651-3/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
                                                                                                                               US-09-088-651-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/09088651 Patent No. 6165771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                              TELEX: 846169
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 683 base pairs
TYPE: nucleic acid
                                                     Ouery Match 9.6%; Score 31.8; DB 3; Length 683; Best Local Similarity 59.3%; Pred. No. 0.81; Matches 54; Conservative 0; Mismatches 37; Indels
                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:

APPLICATION NUMBER: GB9712088.5

FILING DATE: 10-JUNE-1997

APPLICATION NUMBER: EP 97308295.1

FILING DATE: 17-OCT-1997

APPLICATION NUMBER: GB 9803650.2

FILING DATE: 20-FEB-1998

ATTORNEY/AGENT INFORMATION:

NAME: PRESTIA, PAUL F.

REGISTRATION NUMBER: 23,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: CLINKENBEARD, HELEN E.
APPLICANT: SOUTHAN, CHRISTOPHER D.
TITLE OF INVENTION: NOVEL COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: RATNER & PRESTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 610-407-0700
                                                                                                                                                 MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: JUNE CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM CON
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                              TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                        TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             625 CGGTGTCTTTGCTGTAGAGCAGGTTGCACTTGGGTGTGTCGATGATGGGCACAGCGAGTT 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198 CAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           565 TCTGCAGGATCCGCGGTTCGGGCAGGAGGTC 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          258 GGTGAAGGAGCAGCGTGTATACCAGGAGGCC 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54;
198 CAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T: P.O. BOX 91
VALLEY FORGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BURGESS, NICOLA A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                            610-407-0701
                                                                                                                                                                :SS: single
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JUNE 1, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/09/088,651
                                                                                                                                                                                                                                                            س
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 31.8; DB Pred. No. 0.79;
                                                                                                                                                                                                                                                                                                                                                   GH30358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 654;
                                                                0;
                                                                Gaps
```

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-023-942A-30/c
Search completed: December 30, 2003, 06:10:52 Job time : 28.6527 secs
                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-023-942A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORKENS AFFLICATION NUMBER: US/09/023,942A

PILING DATE: 13-FEB-1998

CLASSIFICATION 1435

PRIOR APPLICATION DATA:
APPLICATION UNMBER: PO5101/97

FILING DATE: 13-FEB-1997

PRIOR APPLICATION UNMBER: PP0422/97

PRIOR APPLICATION NUMBER: PP0422/97

FILING DATE: 18-NCV-1997

PRIOR APPLICATION NUMBER: International PCT APPLICATION DATA:
APPLICATION NUMBER: International PCT APPLICATION PATA:
APPLICATION NUMBER: 13-FEB-1998
ATTORNEY/AGENT INFORMATION:
NAME: DIGIGIOLO, FRANK S
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 11168
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 30, Application US/09023942A
Patent No. 6479274
GENERAL INFORMATION:
APPLICANT: (US only) ANTALIS Toni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (516) 742 4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 990 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 54; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: (US only) ANTALIS Toni Marie and HOOPER John David
TITLE OF INVENTION: NOVEL MOLECULES
NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS: 30
ADDRESSEE: SCULLY, SCOTT, MURPHY & PRESSER
STREET: 400 GARDEN CITY PLAZA
CITY: GARDEN CITY
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     309 refecación rececerres de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  258 GGTGAAGGAGCAGCGTGTATACCAGGAGGCC 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               369 CGGTGTCTTTGCTGTAGAGCAGGTTGCACTTGGGTGTGTCGATGATGGGCACAGCGAGTT 310
                                                                                                                                                                                                                                                                                                                                                                                    525 CGGTGTCTTTGCTGTAGAGCAGGTTGCACTTGGGTGTGGTCGATGATGGGCACAGGGAGTT 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198 CAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTT 257
                                                                                                                                                                                          465 TCTGCAGGATCCGCGGTTCGGGCAGGAGGTC 435
                                                                                                                                                                                                                                                                                            258 GGTGAAGGAGCAGCGTGTATACCAGGAGGCC 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9.6%;
milarity 59.3%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (516) 742 4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 31.8; DB 4; Length 980; Pred. No. 0.96; O; Mismatches 37; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                    261.5
891.5
891.5
81.5
781.5
72.7
72.7
73.7
70.5
70.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
US-10-019-455A-26
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    December 29, 2003, 16:03:18; Search time 11.4006 Seconds (without alignments) 927.898 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283308 seqs, 96168682 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR 76:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
356660

1711366

1721366

1748525

1748525

1766793

1706793

1706793

1706793

1706793

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706719

1706
                                                                                                                                                                                                                                                                                                                                                                                               I51940
T32734
RGBYC5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I38019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                    hypothetical prote
probable chromomet
3',5'-cyclic-GMP p
allin lyase (EC 4
                                                                                                                                                                                                                                         receptor kinase ho mixed-lineage prot hypothetical prote VHS domain contain
                                                                   hypothetical prote hypothetical prote S-receptor kinase
                                                                                                                                                                                         transcription regu
protein-tyrosine k
protein-tyrosine k
                                                                                                                                                                                                                                                                                                                                                                                                                 transforming prote
gene VAV2 protein
myosin-IA - Acanth
                                                                                                                                                                                                                                                                                                                                                                                                                                                            transforming prote
                probable peroxisom probable signal tr hypothetical prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                               hypothetical prote ATP-dependent RNA
                                                                                                                                                                                                                                                                                                                                                 hypothetical prote hypothetical prote
                                                                                                                                                                                                                                                                                                                                                                                   protein-glutamine
                                                                                                                                                                                                                                                                                                                                                                                                     division cont
```

ALIGNMENTS

RESULT 1

TVMSVV transforming protein vav - mouse c;Species: Mus musculus (house mouse) c;Date: 03-May-1994 #sequence_revision 16-Feb-1996 #text_change 18-Jun-1999 c;Accession: A61187; A39576; S36941; S23669 R;Coppola, J.; Bryant, S.; Koda, T.; Conway, D.; Barbacid, M. cell Growth Differ. 2, 95-105, 1991 A;Title: Mechanism of activation of the vav protooncogene. A;Reference number: A61187; MUID:91299578; pMID:2069873 A;Accession: A61187 A;Status: not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-844 <cop> A;Katzav, S.; Cleveland, J.L.; Heslop, H.E.; Pulido, D. Mol. Cell. Biol. 11, 1912-1920, 1991 A;Title: Loss of the amino-terminal helix-loop-helix domain of the vav proto-oncogene A;Reference number: A39576; MUID:91172176; pMID:2005887 A;Hocession: A39576; MUID:91172176; pMID:2005887 A;Hocession: A39576; MUID:91172176; pMID:2005887 A;Hocession: A39576; MUID:91172176; pMID:2005887</cop>	Query Match 44.2%; Score 261.5; DB 2; Length 131; Best Local Similarity 45.4%; Pred. No. 4.3e-20; Matches 49; Conservative 24; Mismatches 30; Indels 5; Gaps 3; Qy 5 MDXLSSKXLCADDECVYTISLARAQEDYNAPDCRFIDVXCQQIYYYSKLVTENGAGE-F 63	I38019 melanoma-derived growth regulatory protein MIA - human C;Species: Homo sapiens (man) C;Date: 17-May-1996 #sequence_revision 17-May-1996 #text_change 04-Mar-2000 C;Accession: I38019; S40238 R;Blesch, A.; Bosserhoff, A.K.; Apfel, R.; Behl, C.; Hessdoerfer, B.; Schmitt, A.; Jac Cancer Res. 54, 5695-5701, 1994 A;Title: Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA. A;Reference number: I38019; MUID:95007612; PMID:7923218 A;Accession: I38019; MUID:95007612; PMID:7923218 A;Molecule type: mRNA A;Residues: preliminary; translated from GB/EMBL/DDBJ A;Cross-references: EMBL:X75450; NID:g438057; PIDN:CAA53203.1; PID:g438058 C;Genetics: A;Gene: mia C;Superfamily: human melanoma-derived growth regulatory protein MIA

```
A;Title: The hematopoietically expressed vav proto-oncogene shares homology with the db A;Reference number: $23669; MUID:92228488; PMID:1565462
A;Contents: annotation; the authors note the frameshift difference with sequence in A61: A;Note: the complete sequence was submitted to Genbank; see $36941
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Residues: 1-323,'DLLMVPMQRVLKYHLLLQELVK',346-347,'QDAT',352,'K',354,'N',355-453,'R',
A;Cross-references: EMBL:X64361; NID:g55220; PIDN:CAA45713.1; PID:g55221
R;Adams, J.M.; Houston, H.; Allen, J.; Lints, T.; Harvey, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: S36941
A; Accession: S36941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             submitted to the EMBL Data Library, January 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:M59833; NID:g202343; PIDN:AAA63402.1; PID:g202344 R;Adams, J.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Residues: 1-28, 'E', 30-93 < KAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;486-493/Region: nuclear location signal F;515-563/Domain: protein kinase C zinc-binding repeat homology <KZl>F;528-548/Region: zinc finger CCCC motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Superfamily: vav transforming protein; CDC24 homology; protein kinase C zinc-binding C;Keywords: phosphoprotein; transforming protein; zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Homo sapiens (man)
C;Date: 31-Mar-1991 #sequence revision 03-May-1996 #text_change 18-Jun-1999
C;Accession: B39576; S05382
R;Katzav, S.; Cleveland, J.L.; Heslop, H.E.; Pulido, D.
Mol. Cell. Biol. 11, 1912-1920, 1991
A;Title: Loss of the amino-terminal helix-loop-helix domain of the vav proto A;Reference number: A39576; MUID:91172176; PMID:2005887
A;Accession: B39576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;528-548/Region: zinc finger CCCC motif
F;553-566/Region: zinc finger HCCH motif
F;575-582/Region: nuclear location signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;606-609/Region: proline-rich
F;670-761/Domain: SH2 homology <SH2>
F;788-836/Domain: SH3 homology <SH3B>
F;439/Binding site: phosphate (Ser) (covalent) (by protein kinase A) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;336-340/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;194.458/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;132-176/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;32-102/Region: leucine-rich
A;Molecule type: mRNA
A;Residues: 62-839 <AXT2>
A;Cross-references: EMBL:X16316
R;Adams, J.M.; Houston, H.; Allen,
Oncogene 7, 611-618, 1992
                                                                                                                                                                                   A;Cross-references: GB:M59834; NID:g340189; PIDN:AAA63267.1; PID:g340190
A;Note: the authors translated the codon CAA for residue 6 as Glu, CAG for residue 13 as R;Katzav, S.; Martin-Zanca, D.; Barbacid, M.
EMBO J. 8, 2283-2290, 1989
A;Title: vav, a novel human oncogene derived from a locus ubiquitously expressed in hema A;Reference number: S05382; MUID:90005432; PMID:2477241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;604-654/Domain: SH3 homology <SH3A>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1-61 <KAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N;Alternate names: finger protein vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transforming protein vav - human (fragments)
                                                                                                                                                                   A;Accession: S05382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        786 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YVEED--YSE 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proline-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDC24 homology <CD24>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15.5%; Score 91.5; DB 1; Length 84
32.9%; Pred. No. 0.2;
tive 14; Mismatches 20; Indels
                                             ٦
:
                                                Lints,
                                          T.; Harvey,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Length 844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of the vav proto-oncogene ad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            834
```

S

밁

GRIGWFPSTYVEEEGI 877

```
A;Note: in the sequence from mouse the authors find three additional nucleotides that occurred in the published human sequences C;Comment: In comparing these sequences with the mouse (see PIR:TVMSVV), there appear C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;188-452/Domain: CDC24 homology <CD24>
F;509-557/Domain: CDC24 homology <CD24>
F;509-557/Domain: protein kinase C zinc-binding repeat homology <KZ2>
F;522-542/Region: zinc finger CCCC motif
F;522-540/Region: zinc finger HCCH motif
F;598-648/Domain: SH3 homology <SH3A>
F;664-756/Domain: SH2 homology <SH3A>
F;783-831/Domain: SH3 homology <SH3B>
F;783-831/Domain: SH3 homology <SH3B>
F;433/Binding site: phosphate (Ser) (covalent) (by protein kinase A) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GDB:127112; OMIM:164875
A;Map position: 19p13.3-19p13.3
C;Superfamily: vav transforming protein; CDC24 homology; protein C;Keywords: phosphoprotein; transforming protein; zinc finger C;Keywords:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Title: The hematopoietically expressed vav proto-oncogene shares homology with the A;Reference number: $23669; MUID:92228488; PMID:1565462
A;Contents: annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Gene: GDB:VAV1; VAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Henske, E.P.; Short, M.P.; Jozwiak, S.; Bovey, C.M.; Ramlakhan, S.; Haines, J.L.; Kw Ann. Hum. Genet. 59, 25-37, 1995
A;Title: Identification of VAV2 on 9q34 and its exclusion as the tuberous sclerosis ge A;Reference number: I51940; MUID:95283235; PMID:7762982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;126-170/Region: acidic
                                                                                                                                                                                                                                                A;Map position: 9q34-9q34
C;Superfamily: vav transforming protein; CDC24 homology; protein kinase C C;Superfamily: vav transforming protein; CDC24 homology <CD24>
F;198-462/Domain: CDC24 homology <CD24>
F;524-572/Domain: protein kinase C zinc-binding repeat homology <KZ2>
F;673-764/Domain: SH2 homology <SH2>
F;823-872/Domain: SH3 homology <SH3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                           A;Gene: GDB:VAV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:S76992; NID:g913345; PIDN:AAB34377.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-878 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: I51940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
                                              밁
                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references: GDB:370880; OMIM:600428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Geneti
                                                                                                                                                                                               Query Match
                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             830 YVEED--YSE 837
                                              812 VFTPRVIGTAVARYNFAARDMRELSLREGDVVRIYSRIGGDQG---WWKG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86 LVKEQRVYQE 95
                                                                                             20 VYT---ISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEM 76
77 GIVGYFPSNLVKEORV 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15.1%; Score 89.5; DB 32.9%; Pred. No. 0.32;
                                                                                                                                                                          14.3%;
27.6%;
                                                                                                                                                   20;
                                                                                                                                                                          Score 84.5; DI
Pred. No. 1.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                         DB
                                                                                                                                                        22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20;
                                                                                                                                                                                                       ار
د
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 839;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PID:g913346
                                                                                                                                                        13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     kinase
                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                              ETN 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       zinc-binding
                                                                                                                                                                                                                                                                                                                                                                     zinc-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85
```

```
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-1215 <LEE>
A;Cross-references: EMBL:AF085185; NID:g3599477; PID:g3599478; PIDN:AAC35357.1
A;Experimental source: strain Neff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Lee, W.L.; Ostap, E.M.; Zot, H.G.; Pollard, T.D.
submitted to the EMBL Data Library, August 1998
A;Description: Hydrodynamic and ligand binding properties of Acanthamoeba myosin-IA GPA/
A;Reference number: Z21216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Broek, D.; Toda, 1.; "Lucure".

Cell 48, 789-799, 1987

A;Title: The S. cerevisiae CDC25 gene product regulates

A;Reference number: A26596; MUID:87131091; PMID:3545497

A;Accession: A26596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Introns: 1/3; 41/3; 72/2; 103/2; 162/3; 184/1; 217/1; 296/1; 340/3; 390/3; 447/3; 500, C;Superfamily: protozoan myosin heavy chain IB; myosin motor domain homology; SH3 homology; f;14-674/Domain: myosin motor domain homology <MMO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 08-Sep-2000 C;Accession: T32734 R;Lee, W.L.; Ostap, E.M.; Zot, H.G.; Pollard, T.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               myosin-IA -
C;Species: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell division control protein CDC25 - yeast (Saccharomyces cerevisiae) N;Alternate names: protein L2142.6; protein YLR310c C;Species: Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                              A;Residues: 1-1589 <PAU>
A;Residues: 1-1589 <PAU>
A;Cross-references: EMBI:U17247; NID:g577216; PIDN:AAB67360.1; PID:g577222; GSPDB:GN0001
R;Camonis, J.H.; Kalekine, M.; Gondre, B.; Garreau, H.; Boy-Marcotte, E.; Jacquet, M.
EMBO J. 5, 375-380, 1986
A;Title: Characterization, cloning and sequence analysis of the CDC25 gene which control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Pauley, A.
submitted to the EMBL Data Library, November 1994
A;Description: The sequence of S. cerevisiae cosmid L2142
A;Reference number: S51437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1993 #text_change 21-Jul-2000 C;Accession: A26596; S51442; A23444; S43051; S47990 R;Broek, D.; Toda, T.; Michaeli, T.; Levin, L.; Birchmeier, C.; Zoller, M.; Powers, S.; Cell 48, 789-799, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Gene: MIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: T32734
                                                                                        Curr. Genet. 10, 879-885, 1986
A;Title: The CDC25 "Start" gene of Saccharomyces cerevisiae: sequencing of the active A;Reference number: S43051; MUID:88194639; PMID:3329037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
A; Molecule type: DNA
A; Residues: 877-1589 < DAN>
                                                                                                                                                                                                                                                                                                                        A;Title: Characterization, cloning and sequence analysis of the CDC25 gene which control A;Reference number: A23444; MUID:86220116; PMID:3011405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:M15458; NID:g171184; PIDN:AAA34478.1; PID:g171185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-1589 <BRO>
                                                     A; Accession: S43051
                                                                                                                                                                                R;Daniel,
                                                                                                                                                                                                             A; Cross-references: EMBL: X03579;
                                                                                                                                                                                                                                            A;Residues:
                                                                                                                                                                                                                                                                      A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                        A; Accession: A23444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: S51442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Species: Acanthamoeba castellanii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1205 GVFPANYVED 1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1158 VPTVGRCRALYDYGAQEADELTLREGDVIDVIQK-----SGEWWEGTLNGK-----T 1204
                                                                                                                                                                                С.
Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20 VYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIV 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80 GYFPSNLVKE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acanthamoeba castellanii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21;
                                                                                                                                                                                                                1-496,'Y',498-953,'LSVIMNLSR',964-1589 <CAM>
erences: EMBL:X03579; NID:g3483; PIDN:CAA27259.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 81.5; DB 2; Pred. No. 3.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the RAS/adenylate cyclase pathw
                                                                                                                                                                                                                      PID: g3484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

A/Experimental source: clone Y116A8C C/Genetics:

A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-1097 <WIL> A;Cross-references: EMBL:AL117204; PIDN:CAB55138.1; CESP:Y116A8C.36

A; Reference number: Z21041 A; Accession: T31504

submitted to the EMBL Data Library, October 1999

R;McMurray, A.

Accession:

T31504

hypothetical protein Y116A8C.36 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text

;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change

T31504

```
A;Description: positive control of level of cellular cAMP at the stage at which the ce. C;Superfamily: budding yeast CDC25; CDC25-type guanine nucleotide exchange activator how C;Keywords: cell cycle control; transmembrane protein F;65-123/Domain: SH3 homology <SH3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Map position: 12R C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;1301-1542/Domain: CDC25-type guanine nucleotide exchange activator homology <SOS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Gene: SGD: CDC25; CTN1; MIPS: YLR310c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:X03579 C;Genetics:
                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:S79761; NID:g1176434; PIDN:AAB35370.1; PID:g1176435 C;Superfamily: protein-glutamine gamma-glutamyltransferase C;Keywords: aminoacyltransferase F;272/Active site: Cys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eur. J. Biochem. 232, 411-419, 1995
A;Title: Tissue-type transglutaminase from red sea bream (Pagrus major). Sequence anal:
A;Reference number: S66662; MUID:96035874; PMID:7556189
A;Accession: S66662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N;Alternate names: transgittaminase
C;Species: Chrysophrys major (red sea bream)
C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 18-Jun-1999
C;Accession: S66662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein-glutamine gamma-glutamyltransferase (EC 2.3.2.13) - red sea bream
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            866662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
맑
                                            Ş
                                                                                                    밁
                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Yasueda,
                                                                                                                                                                                                                                                                                                                                                                                                          A;Residues: 1-695 <YAS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H.; Nakanishi, K.; Kumazawa, Y.; Nagase, K.; Motoki, M.; Matsui, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100 WWDGLVIDDSNGKVN-RGWFPQNFGRPLR 127
                                                                                                    393 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63 FWAGSVYGDHODEMGIVGYFPSNLVKEQR 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45 LSSSPSTSELTSIRPIGIVVAAYDFNYPIKKDSSSQLLSVQQGETIYILNK----NSSG-
                                                                                                                                                   31 DYNAPDCRFIDVKKGQQIYVYSKLVTENGAG---EFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                  88 KEORVYQEATKEI -- PTTDI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24; Conservative
                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSSKKLCADEECVYTISLARAQEDYNAP-----DCRFIDVKKGQQIYVYSKLVTENGAGE 62
     KEREVYKKAGRRVTEPSNEI 467
                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transglutaminase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGD:S0004301; MIPS:YLR310c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13.3%; Score 78.5; Di
27.0%; Pred. No. 9.3;
                                                                                                                                                                                                                             13.0%; Score 77;
27.5%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18; Mismatches
                                                                                                                                                                                                     20; Mismatches
                                                                                                                                                                                                                                                          DB 2; Length 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 1589;
                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11;
                                                                                                                                                                                                               10;
                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                               ω
```

```
A; Gene: CESP:Y116A8C.36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Introns: 50/3; 245/3; 411/3; 486/3; 697/1; 820/3; 926/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence revision 15-Oct-1999 #text_change 29-Oct-1999
C;Accession: T21356; T21540
R;Wilkinson, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein F25H2.13 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:Z83224; PIDN:CAB05720.1; GSPDB:GN00019; CESP:F25H2.13
A;Experimental source: clone F29C6
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              submitted to the EMBL Data Library, December 1996
A;Reference number: Z19437
A;Accession: T21540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:Z79754; PIDN:CAB02102.1; GSPDB:GN00019; CESP:F25H2.13
A;Experimental source: clone F25H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: Z19411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           submitted to the EMBL Data Library, September 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Introns: 129/2; 177/1; 206/2; 349/3; 436/3; 506/2; 626/3; 689/3; 772/3; 845/3; 903/3;
                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene: CESP: F25H2.13
                                                                                                         hypothetical protein T22P22.50 - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 20-Apr-2000 C;Accession: T48525
                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                        В
                                                               C;Accession: T48525
R;Bevan, M.; Hilbert, H.; Braun, M.; Holzer, E.; Brandt, A.; Duesterhoeft, A.;
submitted to the Protein Sequence Database, April 2000
                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
A;Reference number: Z24490
A;Accession: T48525
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1033 SEAASPATRÁTÁVYDÝBÁSQPDELGFKTGDVÍ----IVTDKSEAEWWS----GHREQDP 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1084 SKSGLFPSNYVQQQ 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17 EECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLYTENGAGEFWAGSVYGDHQDEM 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                339 MDKLFGSSQLKSVPPLSGKASDGE-ILLETLAKAGFDANSVE-RLVDVLRDAISYLLSKN 396
                                                                                                                                                                                                                                                                                                                                                                           397 EEVALTÉKGDGMEKVADFLL-SIÝSTHAQDVAAAVGEETVKLVDRVDÉKTVARNCKLÝIQ 455
                                                                                                                                                                                                                                                                                         456 KDKDNEKLTÍKYFC 469
                                                                                                                                                                                                                                                                                                                                                                                                                     54 ---LVTENGAG-----EFWAGSVYGDH-QDEMGTVG------YFPSNLVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                  96 ATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 MDKL-SSKKL------CADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSK- 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GIVGYFPSNLVKEQ 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative 10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12.4%; Score 73; DB 2; Length 994; 27.6%; Pred. No. 21; ative 20; Mismatches 45; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 74.5; DB 2; Length 1097; Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                            Bancroft
```

```
A, Experimental source: cultivar Columbia; BAC clone T22P22 C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Residues: 1-308 <BEV>
A; Cross-references: EMB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Map position: 5
A;Introns: 63/3; 117/3; 135/3; 180/3
A;Note: T22P22.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Nolling, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.S.; Zeng, Q.; Gibson, R.; Le.; Daly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R.
J. Bacteriol. 183, 4823-4838, 2001
A;Title: Genome Sequence and Comparative Analysis of the Solvent-Producing Bacterium CA;Reference number: A96900; MUID:21359325; PMID:21359325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATP-dependent RNA helicase, superfamily II [imported] - Clostridium acetobutylicum C;Species: Clostridium acetobutylicum C;Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 14-Sep-2001 C;Accession: G96995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: DNA
A;Residues: 1-585 <KUR>
A;Cross-references: GB:AE001437; PIDN:AAK78754.1; PID:g15023664; GSPDB:GN00168
A;Experimental source: Clostridium acetobutylicum ATCC824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: preliminary
                                                                                                                                                                                                                     R;Feuillet, C.; Schachermayr, G.; Keller, B.
Plant J. 11, 45-52, 1997
A;Title: A novel class of receptor-like kinase mapping to the Lr10 locus in wheat.
A;Reference number: Z15819; MUID:97177795; PMID:9025301
A;Accession: T06793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Gene: CAC0778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                             receptor kinase homolog LRK10 - wheat
N;Alternate names: rust resistance kinase Lr10
C;Species: Triticum aestivum (common wheat)
C;Date: 23-Apr.1999 #sequence_revision 23-Apr.1999 #text_change 11-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                        A,Molecule type: DNA
A,Residues: 1-636 <FEU>
A,Cross-references: EMBL:U51330; NID:91680685; PIDN:AAC49629.1; PID:91680686
                                                                                                                                                                                                  A:Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           T06793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
A;Map position: 1
A;Introns: 272/1; 280/1
C;Superfamily: unassigned Ser/Thr
                                                                    A;Gene: LRK10
                                                                                                           A; Experimental source: leaf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                             ;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              168 KGQERAVYASIVQEKDIĞNWWVTDVRYDRPDVH--IĞYWPKEL 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44 KGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNL 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272 KDCEDEYEIKEYKRAIPLEVEDESFN-----YKDIKEGDAVVVFSKKRVLEIAQSYSARG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    327 IXASIIYGDLPPEVRKLQY-----EQFIKKE-TKVLVTTD 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63 FWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTD 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 KLCADE----ECVYTISLARAQEDYNAPDCRFIDVKKGQQIYYYSK-----LVTENGAGE 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12.2%; Score 72; DB 29.4%; Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2; Length 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 585;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

or Tyr-specific protein kinases; protein kinase homo

- <u>-</u>

```
jannaschii
```

Search completed: December 29, 2003, 16:10:40

time

11.4006 secs

```
mixed-lineage protein kinase (EC 2.7.1.-) 3 - human
N.Alternate names: protein kinase PTK1; protein kinase SPRK
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: A53800; IS395
R;Gallo, K.A.; Mark, M.R.; Scadden, D.T.; Wang, Z.; Gu, Q.; Godowski, P.J.
J. Biol. Chem. 269, 15092-15100, 1994
A;Reference number: A53800; MUID:94253068; PMID:8195146
A;Accession: A53800; MUID:94253068; PMID:8195146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:U07747; NID:g464027; PIDN:AAA19647.1; PID:g464028 R;Ing, Y.L.; Leung, I.W.; Heng, H.H.; Tsui, L.C.; Lassam, N.J. Oncogene 9, 1745-1750, 1994 A;Title: MLK-3: identification of a widely-expressed protein kinase bearing an SH3 domain, Reference number: I58395; MUID:94239754; PMID:8183572 A;Accession: I58395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GDB:134755; OMIN:600050

A;Map position: 11q13.1-11q13.3

C;Superfamily: mixed-lineage protein kinase 3; protein kinase homology; SH3 homology; C;Keywords: ATP; leucine zipper; phosphotransferase; serine/threonine-specific protein f;48-100/Domain: SH3 homology <SH32>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-847 <RES>
A;Cross-references: GB:L32976; NID:g488295; PIDN:AAA59859.1; PID:g488296
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
RiBult, C.J., White, O., Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Blake; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Werrick, J.M.; Glodek, A. rson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Hurst, M.A. Science 273, 1058-1073, 1996
A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannasch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;115-383/Domain: protein kinase homology <KIN>
F;123-131/Region: protein kinase ATP-binding motif
F;403-424/Region: leucine zipper motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                        仔
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;438-459/Region: leucine zipper motif F;468-482/Region: basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: GDB:MLK3; PTK1; SPRK
A;Cross-references: GDB:13479
                                                                                                                                                                                                                                                                    hypothetical protein MJ1020 - Methanococcus jannaschii
                                                                                                                                                                                                                                                                                                                                  RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                              Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000;Accession: C64427
                                                                                                                                                                                                                                      Species: Methanococcus jannaschii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         470 HNILLDYNFNPKISDFGLAKLCARDQSIVTLTAARGTMGYIAPELYSRNFGGVSYKADVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     530 SFGMLVLEMVSGRRNSDPRIGS-QDDV----YLPEWIYEKVINGEELALTLETT 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50 VYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31 DYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HGVFMD----KLSS---KKLCADEECVYTISLARAQEDYNAPDC---RFIDVKKGQQIY 49
                                                                                                                                                                                                                                                                                                                                                                                                                        51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 12.1%;
Similarity 33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12.2%; Score 72; DB 2; Length 636; 25.4%; Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 71.5; DE
Pred. No. 25;
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         serine/threonine-specific protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
A;Reference number: A64300; MUID:96337999; PMID:8688087
A;Accession: C64427
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: DNA
A;Residues: 1-259 <BUL>
A;Cross-references: GB:U67544; GB:L77117; NID:g1591671; PIDN:AAB99024.1; PID:g1591678;
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VHS domain containing, signal transducing adaptor STAM-like protein - fission yeast (Scipecies: Schizosaccharomyces pombe C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 07-Dec-1999 C;Accession: T39655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:AL031856; PIDN:CAA21302.1; GSPDB:GN00067; SPDB:SPBC1734.08 A;Experimental source: strain 972h-; cosmid c1734 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Lyne, M.; Rajandream, M.A.; Barrell, B.G.; Rieger, M. submitted to the EMBL Data Library, October 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-373 <LYN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                        Ś
                                                                                             뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: T39655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: Z21868
  밁
                                                                                                                                     Ş
                                                                                                                                                                                                                                                                             A; Introns: 43/2; 68/3; 142/1
                                                                                                                                                                                                                                                                                                     A; Map position: 2
                                                                                                                                                                                                                                                                                                                             A; Gene: SPDB:SPBC1734.08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     position: FOR950420-951199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                      Match 12.0%; Score 71; DB 2; Length 373; Local Similarity 32.1%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     169 GTDMTKGRSRIPICKKCYDIHSVSAASIER------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          217 NEAGIFQIQEVLGEKIKWSGIKNYVSVYARVEKEKPVFEEIT 258
                                                                                        216 TVSRVRALYDFAATEQGELSFKKGDII-----LVLESVYKDWWKGSC------KNAVGI 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26; Conservative
264 FPVNYV--QRVVEPTIEQ 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58 NGAGEFWAGSVYGDHODEMGIVGYFP--SNLVKEQRVYQEAT 97
                                             82 FPSNLVKEQRVYQEATKE 99
                                                                                                                                   22 TISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLYTENGAGEFWAGSVYGDHQDEMGIVGY 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GVFMDKLSSK----KLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTE 57
                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12.0%; Score 71; DB 25.5%; Pred. No. 7.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17; Mismatches
                                                                                                                                                                                          10;
                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2; Length 259
                                                                                                                                                                                            29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -VEIKEGDEKPIQIEVILS 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                              Gaps
```

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                     Result
No.
                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                     Database :
             pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                           465.5
547.5
399
261.5
260.5
259.5
245.5
91.5
91.5
91.5
89.5
89.5
84.5
77.7
                                                                                                                                                                                                                                                      Score
                   71
70.5
70.5
70.5
70.6
                                                                                     71.
             68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December 29, 2003, 16:03:18; Search time 4.31373 Seconds (without alignments) 1199.181 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                   591
                                                                                                                                                                                                                                                                                                                                                                                                      127863 segs, 47026705 residues
                                                                                                                                                                                                                                                                                                                                                                                                                   Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-26
                                                                                                                                                                                                                                                      Match Length
                                                                                                                                                                                                                                                            Query
                                                                                                                                                                                                                 100.0
92.6
78.8
67.5
                                                                                                                                                                                                                                                                                                                                    Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                               444.1
43.9
41.5
15.5
15.5
15.5
15.1
                                                                                                                                                                                                                                                                                                                      SwissProt_41:*
                                                                                                                                                                                                                                                                                                                                              Maximum Match
GenCore version 5.1.6
(c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                             100%
                                                                                                    MIA BOVIN
MIA-MOUSE
VAV RAT
VAV MOUSE
VAV HUMAN
VAV2-MOUSE
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-HUMAN
VAV2-PAGMA
SHK1-RAT
                                                                                                                                                                                                                                OTOR MOUSE
                                                                                                                                                                                             OTOR_CHICK
OTOR_RANCA
MIA_HUMAN
MIA_RAT
MIA_BOVIN
                      ITNI HUMAN
SHK3 RAT
SRK1 SPOLA
SRK4 SPOLA
CNRA MOUSE
ALLN ALLSA
YBY2 SCHPO
      NCK1_HUMAN
AROA_STRP8
                                                                                                                                                                                                                                                                               SUMMARIES
                                                                          HUMAN
METJA
MOUSE
                                                                                           Q9y566 homo ww...
Q9wv48 rattus norv
O9wve9 rattus norv
                                                                                                                                    P42690 spongilla l
P27664 mus musculu
Q01594 allium sati
Q10199 schizosacch
P16333 homo sapien
Q8p0h1 streptococc
Q99z83 streptococc
                                                                                                                                                                                                                                                          Description
                                                                          Q58426
Q9z0r4
                                                                                                                                                                                                              rana cateso
homo sapien
                                                                                                                                                                                                                                            mus musculu
                                                                                                                                     mus musculu
homo sapien
                                                                                                                                                                                                      rattus norv
                                                                                                                                                                                                                                    homo sapien
                                               spongilla
spongilla
                                                                                                                                                   homo sapien
                                                                                                                                                                  mus musculu
                                                                                                                                                                         mus musculu
                                                                                                                                                                                                bos taurus
                                                             rattus
                                                                                   methanococc
                                                                                                                              saccharomyc
                                                                                                                                                                                  rattus norv
                                                                                                                       pagrus majo
                                                                     homo sapien
                                                                            mus musculu
                                                                                                                                                                                         musculu
                                                                                                                                                                                                                    catesb
                                                                                                                                                                                                                             gall
                                                             norv
     RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 444
444
444
444
444
444
                                                                                                                                                                                                                                                                                                                                                                                                OTOR MOUSE
                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                            OTOR OR MIAL.
                                                                                                                                                                                                                                              TISSUE=Fetal
                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                  MGD; MGI:1888678; Otor.
GO; GO:0001502; P:cartllage condensation; IMP.
GINTERPRO; IPR001452; SH3.
Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3; 1.
                   Signal; SH3 domain.
SIGNAL 1
       19
19
       18
128
110
```

•																	
66	66		U U	66.5	0.0	1	თ თ ა	0 /	;	67.5	6/.0	1	л 7	σ	0 0	Ω Ω	
11.2	11.2			11.3	1	,	11.3	F - U		11.4	11	ا د د د	11.4	11.0	n (5	
380	3 2 0	٠ د د	727	040	1 (204	496		671	1658		443	(J)		0 7 4	۷.)
-	٠,		_	۲	٠,	-	۲	. 1	-	٢	٠,	_	۲	• •	_	۲	•
NCKZ HOWAN		COAD THEVO	NAMOH WZAI	1071 2000	TOBA TOBA	BI.K HUMAN	I /UU LINNO	MACO	VINE HUMAN	TIME MOODE	TOTO MOTTO	SGT1 ARATH	PGIS ASPING	2017	MAKA HUMAN	ATME MOCOR	TOTAL MOTTON
	043639 home	Q97bq0 cner		P46199 home	O66893 aqui	LOFT TOWN	ביי אבן הספר	005070 anab	000000	Occasor homo	09z0z6 mus	Caran Charac	מינות משני מינות	012554 aspe	Culou 677700		09r1z8 mus
	o sapien	meprooma		o gapien	aquitex aeo	C S TO I I I	משלופת	dena sp	019	sapien	muscuru	0.0000000	ממסחות	sulling	adores	0000.00	mus musculu

ALIGNMENTS

```
MEDLINE=20334619; PubMed=10873378; Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; "A novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping."; Genomics 66:242-248(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Otoraplin precursor (Melanoma inhibitory activity-like protein)
                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ibb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=21100875; PubMed=11161796;
EMBL; AF233333; AAF82079.1; -.
EMBL; AJ243939; CAC27444.1; -.
HSSP; Q16674; IIIJ.
                                                                                                                                                                                                                                                                                                                                                       -!- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  128
```

POTENTIAL. OTORAPLIN. SH3.

```
RESULT
OTOR_H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
RX MEDLINE=21638749; PubMed=11780052;

REDLINE=21638749; PubMed=11780052;

A DeLoukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,

A DeLoukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,

A Deloukas P., Matthews L.H., Ashurst J., Barbage A.K., Bagguley C.L.,

A Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,

Baalley J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,

Baalley J., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,

Baesley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,

A Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,

A Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,

A Chapman J.C., Coville G.J., Butler A.P., Connor R.E., Corty N.R.,

Collson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,

Collson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,

Collson A., Coriffiths G.J., Fraser A., French L., Garner P.,

A Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,

A Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,

A Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,

A Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                [3]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
TISSUE-Brain, and Cochlea;
TISSUE-Brain, and Cochlea;
MEDLINE-2110875; PubMed=11161796;
MEDLINE-2110875, Prodin M., Attie-Bitach T., Vekemans M., Tommerup N.;
Rendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommerup N.;
"Identification and characterization of an inner ear-expressed human "Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTOR HUMAN
O9NRC9;
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Otoraplin precursor (Fibrocyte-derived protein) activity like protein).
OTOR OR FDP OR MIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-OCT-2001 (Rel.
16-OCT-2001 (Rel.
28-FEB-2003 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=20334619; PubMed=10873378;
Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.;
PA novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=20568254; PubMed=10998416; Cohen-Salmon M., Frenz D., Liu W., Verpy E., Voegeling S., Petit Cohen-Salmon M., Frenz D., Liu W., Verpy E., Voegeling S., Petit "Fdp, a new fibrocyte-derived protein related to MIA/CD-RAP, has in vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mesenchyme.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genomics 66:242-248(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rissuE≖Cochlea;
                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Biol. Chem. 275:40036-40041(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37
127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14328 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X8
X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3DD47D4C77C4A7FD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.9e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Melanoma inhibitory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Petit C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

OTOR

CHICK

OTOR

CHICK

STANDARD;

132 AA

Q918F6; 16-OCT-2001

SECTORE

16-OCT-2001 (Rel. 40, 16-OCT-2001 (Rel. 40, 28-FEB-2003 (Rel. 41, Otoraplin precursor.

Last sequence update)
Last annotation updat

Created)

```
δ
                                                             밁
                                                                                         Ś
                                                                                                                                              Best
                                                                                                                                Matches
                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AF233261; AAF82078.1; -.
EMBL; AF243505; AAG42356.1; -.
EMBL; AJ242552; CAC27443.1; -.
EMBL; AJ252324; CAC28085.1; -.
EMBL; AJ252326; CAC28085.1; JOINED.
EMBL; AJ252326; CAC28085.1; JOINED.
EMBL; AJ252327; CAC28085.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lehvaeslaiho M.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.W., Martin S.L., McConnachie L.J., McLay K., McMurray A.A., Miller S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., Oliver K., Parker A., Pattel R., Pearce T.A.V., Peck A.I., Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H., Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H., Phillimore B.J.C.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S., Skuce C.D., Smith M.L., Scott C.E., Steward C.A., Sulston J.E., Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E., Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A., Tracey A., Tromans A.C., Vauddin M., Wallis J.M., Williams S.A., Whittaker P., Williams B., Williams S.A., Whittaker P., Williams B., Williams S.A., Whittaker P., Williams B., Beck S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN COCHI-
-!- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
-!- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 414:865-871(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R.,
                                                                                                                                                                                                                                                                                                                              InterPro; IPR001452; S
Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rogers
                                                                                                                                                                                              DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The DNA sequence and comparative analysis of human chromosome 20.";
                                                                                                                                                                                                                                                                                                                                                                                               MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                             Signal; SH3 domain.
SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                мім; 606067; -.
GO; GO:0007605; P:hearing;
                                                                                                                                                                                                                                                                                                                                                                                                                  Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP; Q16674;
                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                 PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Secreted (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                AL034428; CAC16848.1;
                                                              5
 79
                                                                                                -ب
                                                                                                                                                                                                                                                                                                                                                                                                                  HGNC:8517;
                                                                                                                                99.
                                                                                                                                                Similarity
                GEFWAGSVYGDHODEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE
                                                                                               HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                 PS50002;
GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                               128 AA;
                                                                                                                                Conservative
                                                                                                                                                                                                                19
39
55
                                                                                                                                                                                                                                                                                                                                                                                                                               111J.
                                                                                                                                                                                                                                                                                                               SH3; FALSE_NEG
                                                                                                                                                                                                                                                                                                                                                                                                                  OTOR.
                                                                                                                                                                                                                18
128
110
37
127
                                                                                                                                                                                                 14332 MW;
                                                                                                                                                92.6%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                    SH3.
                                                                                                                                                                                                                POTENTIAL.
OTORAPLIN.
SH3.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                  7;
                                                                                                                                                 Score 547; DB 1;
Pred. No. 5.9e-49;
                                                                                                                                                                                                 9BB52C7F5D4FB700 CRC64;
                                                                                                                                  Mismatches
                                                                                                                                                                  Length 128;
                                                                                                                                       Indels
                                                                                                                                       0
                                                                                                                                       Gaps
                                                                          78
                                                                                                                                         0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
     RETAR REPORTED TO THE REPORT OF THE REPORT OF THE REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPORT OF THE RETAR REPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; "A novel conserved cochlear gene, OTOR: identification, expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20334619; pubMed=10873378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF233518; AAF82727.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal; SH3 domain.
SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00326; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP; Q16674;
                                                                                                                                                                                                                                                                                                                                               OTOR RANCA STANDARD; PRT; 133 AA. 9918P5; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
MEDIJINE=20334619; PubMed=10873378; Resendes B.L., Were Robertson N.G., Heller S., Lin J.S., Resendes B.L., Were Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; "A novel conserved cochlear gene, OTOR: identification, analysis, and chromosomal mapping."; Genomics 66:242-248(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RANCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE;
                                                                                                                                                                                                                          Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae;
                                                                                                                                                                                                                                                                                                                        Otoraplin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nterPro;
                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                 NCBI_TaxID=8400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GVFMDKLSSKKLCADEBCVYTTSLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EFWAGSVYG-DHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS50002; SH3; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EFWAGSVYGEEYEDHMGTVGYFPRSLVSEQHVYQEANKTIPTTDIDFFCE 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1
24
42
35
58
132 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
132
114
40
131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78.8%;
77.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15177 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SH3.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
OTORAPLIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 465.5; DB 1;
Pred. No. 1.2e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9D1CB07FD353CE1C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               133 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                  Weremowicz S.,
                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expression
                                                                  expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>بر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
```

```
RESULT 5
PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal; SH3 domain.
SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF233519; AAF82728.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Melanoma derived growth regulatory protein precursor (Melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MIA HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nterPro;
                                                                                                                                                                                                                                                                                                                              Blesch A., Bosserhoff A.-K., Apfel R., Behl C., Hessdoerfer B., Schmitt A., Jachimczak P., Lottspeich F., Buettner R., Bogdahn U "Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                        Bosserhoff A.-K., Hein R., Bogdahn U., I "Structure and promoter analysis of the melanoma inhibiting protein M.A.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inhibitory activity).
  MEDLINE=22388257; PubMed=12477932;
                            TISSUE=Skin
                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                       MEDLINE=96132947; PubMed=8550608;
                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          łomo sapiens (Human)

 Biol.

                                                                                                                                                                                                                                  rissu==Placenta;
                                                                                                                                                                                                                                                                                                           ancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION: Secreted (Potential).
SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q16674;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HGALADERCALISTAKAOEDANA BOCKEIDAKKGOOIAAASKTALEH-G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68;
                                                                                                                                                                                                                                                                                                              Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGEFWAGSVYGD-HQDEMGIVGYFPSNLVKEQRVYQEATKEIFTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YGVYMQKLSDKKLCADDECIYAISFGRAEDDYNAPDCRFVNLKKGELVYIYTKLVKENDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGEFWSGSVYSDQYRDQQGLVGYFPSSLVTELTVYKDELQELPTTAVDFYCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS50002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR001452; SH3.
                                                                                                         Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                              54:5695-5701(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                         271:490-495(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SH3; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133
115
115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67.5%;
60.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15243 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
OTORAPLIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 399; DB 1;
Pred. No. 7.6e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25440C1A3CF911AE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            131 AA
                                                                                                                                                                                        Buettner R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 133;
                                                                                                                                                           gene encoding the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
```

```
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Boownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Malek J.A., Gunaratne P.H.,
RA Bosak S.A., McEvan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Maddan A., Rodrigues S., Sanchez A.,
RA Rodriguez A.C., Grimwood J., Schemutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length
human and mouse CDNA sequences.";

B. 1 and Schmutz J. and Schmutz J. and Schmutz J. and Schmutz J. and Schmutz J. And Schmutz J. And Schmutz J. Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. And Schmutz J. Schmutz J. And Schmutz J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; I38019; I38019.

PDB; IIIJ; 16-MAY-01.

PDB; IHJD; 29-JAM-02.

PDB; 1KOX; 24-JUL-02.

Genew; HGNC:7076; MIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                recently identified family of secreted proteins.";

Proc. Natl. Acad. Sci. U.S.A. 98:5515-5520(2011).

-i. FUNCTION: ELICITS GROWTH INHIBITION ON MELANOMA CELLS IN VITRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=21244635; PubMed=11331761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X-RAY CRYSTALLOGRAPHY (1.39 ANGSTROMS) OF 25-131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                 MIM; 601340; -.
GO; GO:0005615; C:extracellular space; TASGO; GO:0008283; P:cell proliferation; TAS.
Interpro; IPR001452; SH3.
Pfam; PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; X75450; CAA53203.1; -.
EMBL; X84707; CAA59195.1; -.
                                                                                                                                                            DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; BC005910; AAH05910.1; -.
PIR; I38019; I38019.
                                                                                                                                                                                                                                                                                                prOSITE; pS50002; SH3; 1.
Growth factor; Signal; SH3 domain; 3D-structure.
                                                                                                              TURN
                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                               SIGNAL
                                                                STRAND
                                                                                           STRAND
                                                                                                                                        STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: SCOTCHED.

TISSUE SPECIFICITY: ALL MALIGNANT MELANOMA CELL LINES TESTED AND INFREQUENTLY IN GLIOMA CELL LINES.

PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AS WELL AS SOME OTHER NEUROECTODERMAL TUMORS, INCLUDING GLIOMAS
                                                                                                                                                                                                                                                                                                                                                  SM00326; SH3;
  6446933963
                                                                                                                                                                                                                PROTEIN.
SH3.
                                                                                                                                                                                                                                                            MELANOMA DERIVED GROWTH REGULATORY
```

```
MRESULT 6
MIA RAT
ID MIA RAT
ID MIA RAT
ID MIA RAT
ID MIA RAT
ID MIA RAT
RESULT 60.029
ROS RATT FOR SEQUENCE CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
CC -1--
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TURN
STRAND
HELIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAND
HELIX
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAND
HELIX
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TURN
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Melanoma derived growth regulatory protein precursor (Melanoma inhibitory activity) (Cartilage-derived retinoic acid-sensitive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MIA RAT
Q62946; P97591;
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-Sprague-Dawley; TISSUE-Mammary gland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Cidilaca, Verconiaca;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MIA OR CDRAP
                                                                                                                                                                                                                                                                                                                                                                                                             during chondrogenesis.";
J. Biol. Chem. 271:3311-3316(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dietz U.H., Sandell L.J.;
"Cloning of a retinoic acid-sensitive mRNA expressed in cartilage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=96216414; PubMed=8621736;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Cartilage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "dene expression changes associated with chemically-induced rat mammary carcinogenesis.";
                                                                                                                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 34-124 FROM N.A.
                                                                                                                                                                                                     SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                         SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: CARTILAGE PRIMORDIA AND CARTILAGE.
INDUCTION: Repressed by retinoic acid.
PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
                                                                                                                                                                                                                                                                                                                                                                              Siol. Chem. 271:3311-3316(1996).
FUNCTION: MAY FUNCTION DURING CARTILAGE DEVELOPMENT AND
                                                                                                                                                                                                                                                                                                                                                              MAINTENANCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64 WAGSVYGDHQDEMGI-VGYFPSNLVKEQRVYQEATKEIFTTDIDFFÇE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 WGGŚVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGE-F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CD-RAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            131 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
78
81
93
96
101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sandell L.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67
76
80
82
89
94
96
104
107
113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14509 MW; 4D3BB30BD6008BDC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 261.5; DB 1
Pred. No. 7.7e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         u
--
```

```
RESULT 7
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS50002; SH3; FALSE_NEGGrowth factor; Signal; SH3 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; U51438;
EMBL; U67884;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Melanoma derived growth regulatory protein precursor (Melanoma inhibitory activity) (Cartilage-derived retinoic acid-sensitive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP; Q16674;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein) (CD
MIA OR CDRAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q28038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MIA BOVIN
                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EWBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=96216414; PubMed=8621736; Dietz U.H., Sandell L.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dietz U.H., Sandell L.J.;
"Cloning of a retinoic acid-sensitive mRNA expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bovidae; Bovinae; Bos.
     EMBL; U51437; AAC48523.1;
HSSP; Q16674; lIlJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                      send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                           INDUCTION: Repressed by retinoic acid.
PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                            MAINTENANCE.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: CARTILAGE PRIMORDIA AND CARTILAGE
                                                                                                                                                                                                                                                                            SIMILARITY: BELONGS TO THE MIA / O SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGI. Chem. 2/1:3311-3310(1570).
FUNCTION: MAY FUNCTION DURING CARTILAGE DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64 WAGSVYGDHQDEMGI-VGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 WDKTSSKKTCADBECALLISTARYOTSTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATESTARY STATEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chondrogenesis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WGGSVQGDYYGDLAAHLGYFPSSIVREDLTLKPGKVDMKTDEWDFYCQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MPKLADRKLCADEECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CD-RAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46
130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 £
2 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB40659.1;
111J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC52481.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       271:3311-3316(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14536 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cetartiodactyla; Ruminantia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 260.5; DB ...
Pred. No. 9.7e-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SH3.
BY SIMILARITY.
BY SIMILARITY.
MA -> VT (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MELANOMA DERIVED GROWTH REGULATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5F99149AECF74501 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pecora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in cartilage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IJ
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
--
```

```
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIA_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS50002; SH3; 1. Growth factor; Signal; SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MIA MOUSE STANDARD; PRT; 130 AA.

(61865; 009086; P97495;
01-NOV-1997 (Rel. 35, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Melanoma derived growth regulatory protein precursor (Melanoma Activity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001452;
                                                                                                                                                                                                        MEDLINE=97251341; PubMed=9097023;
Bosserhoff A.K., Kondo S., Moser M., Dietz U., Copeland N.G.,
Gilbert D.J., Jenkins N.A., Buettner R., Sandell L.J.;
Gilbert D.J., Jenkins N.A., Buettner R., Sandell L.J.;
Mouse CD-RAP/MIA gene: Structure, chromosomal localization, and
exporession in cartilage and chondrosarcoma.";
Dev. Dyn. 208:516-525(1997).
-I- FUNCTION: ELICITS GROWTH INHIBITION ON MELANOMA CELLS IN VITRO
                                                                                                                                                                                                                                                                                                                                                                                  Blesch A., Bosserhoff A.-K., Apfel R., Behl C., Hessdoerfer B., Schmitt A., Jachimczak P., Lottspeich F., Buettner R., Bogdahn U. "Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inhibitory activity) (Cartilage-derived retinoic
                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=95007612; PubMed=7923218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-BALB/c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MIA OR CDRAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein)
                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                       lancer Res. 54:5695-5701(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: ALL MALIGNANT MELANOMA CELL LINES TESTED INFREQUENTLY IN GLIOMA CELL LINES.
PTM: MAY POSSESS TWO INFRAMOLECULAR DISULFIDE BONDS.
SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
                                                                             SIMILARITY: BELONGS TO THE MIA / O'SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                               SIMILARITY).
                                                                                                                                                                                          WELL AS SOME OTHER NEUROECTODERMAL TUMORS, INCLUDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 WAGSVYGDHQ-DEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26 MPKLADRKMCADEECSHPISVAVALQDYVAPDCRFLTIHQGQVVYIFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WGGSVQGDYYGDGAARLGYFPSSIVREDQTLKPAKTDVKTDIWDFYCQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDKTSSKKTCADEBCVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKTVTENGAGE-F 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (CD-RAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14353 MW; 95D153161C78E02A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       domain.
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 259.5; DB 1;
Pred. No. 1.2e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MELANOMA DERIVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GROWTH REGULATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acid-sensitive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 130;
                                                                                                                                                                                                    GLIOMAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82
```

σ

```
SOFTITION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 9
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
DISULFID
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0007160; P:cell-matrix adhesion; IMP.
GO; GO:0030198; P:extracellular matrix organization and bioge. . .; IMP.
INTERPRO; IPRO01452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X94322; CAA63983.1; -.
EMBL; U85612; AAB42082.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; X97965; CAA66608.1; -. HSSP; Q16674; 111J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth factor; Signal; SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; pri00018; SH3; 1.
SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VAV RAT STANDARD; PKT; 043 AA. P54100; 01-0CT-1996 (Rel. 34, Created) 01-0CT-1996 (Rel. 34, Last sequence update) 15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                        Song J.S., Haleem-Smith H., Arudchandran R., Gomez J., Scott P.M., Mill J.F., Tan T.-H., Rivera J.; Mill J.F., Tan T.-H., Rivera J.; "Tyrosine phosphorylation of Vav stimulates IL-6 production in mast cells by a Rac/c-Jun N-terminal kinase-dependent pathway."; J. Immunol. 163.802-810(1999).
J. Immunol. 163.802-810(1999).
i. FUNCTION: Couples tyrosine kinase signals with the activation of the Rho/Rac GTPases, thus leading to cell differentiation and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99323974; PubMed=10395673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10116;
                                                binding domain.
-!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                            proliferation.
-!- SUBUNIT: Interacts with SLA (By similarity).
                                                                                                                          PTM: Phosphorylated on tyrosine residues.
SIMILARITY: Contains 1 calponin-homology (CH) domain.
SIMILARITY: Contains 1 DBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 zinc-dependent phorbol-ester and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proto-oncogene (p95).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OR VAV.
  SWISS-PROT entry is copyright. It
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 WAGSVYGDHQDEMGI-VGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26 MPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGE-F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WGĠŚVQĠGYYGDLAARLĠŶĖÞŚSIVRĖDLTLKPGKIDMKŤDQWDĖYČQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42
35
58
112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14593 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41.5%; Score 245.5; DB 1; Length 130; 45.4%; Pred. No. 3.3e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SH3.
BY SIMILARITY.
BY SIMILARITY.
TL -> NS (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL, MELANOMA DERIVED GROWTH REGULATORY PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16C957459C5BB5F9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               843
                18
             produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σı
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
```

```
Ś
                                           밁
                                                                Ş
밁
                                                                                        Matches
                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00461; SH2DOMAIN.
PRINTS; PR00452; SH3DOWAIN.
PRINTS; PR00455; SM22CALPONIN.
ProDom; PD001527; CH_type; 1.
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/entities.requires.alicense.agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U39476; AAA98606.1; -.
HSSP; P29354; IGRI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF0062:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00307; CH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nterPro;
                                                                                                                                                                                                                                                                             PROSITE; PS50021; CH; 1.

PROSITE; PS500479; DAG PE BIND DOM_1;

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50010; DH 1; 1.

PROSITE; PS50010; DH 1; 1.

PROSITE; PS50003; PH DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                          SMART;
                                                                                                                                                                                                                                                                                                                                                                                    SMART;
                                                                                                                                                                                                                                                                                                                                                                                                SMART;
                                                                                                                                                                                                                                                                                                                                                                                                           SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                interPro;
                                                                                                                                                                                                                                                                                                                                                   SMART;
                                                                                                                                                                                                                                                                                                                                                             SMART;
                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                    Proto-oncogene; Phorbol-ester binding; Zinc; SH2 domain; SH3 domain;
Guanine-nucleotide releasing factor; Repeat; Phosphorylation.
DOMAIN 1 119 CH.
                                                                                                                                       SEQUENCE
                                                                                                                                                   DOMAIN
                                                                                                                                                             DOMAIN
                                                                                                                                                                          DOMAIN
                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF00130; DAG_PE-bind; 1.
                                           785 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN
 834 YVEED -- YSE 841
                                                                                                                                                                                                                                                                                                                                                                                   SM00033; CH;
SM00233; PH;
                                                                                                                                                                                                                                                                                                                                                                         SM00325; RhoGEF; 1
                                                                                                                                                                                                                                                                                                                                                                                                           SM00109; C1;
                                                                    26
                                                                                                                                                                                                                                                                                                                                                   SM00252; SH2; 1.
SM00326; SH3; 2.
                     86 LVKEQRVYQE
                                                                                           23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR003247; CH type.
IPR002219; DAG PE-bind.
IPR001331; GDS_CDC24.
                                                                                                      Similarity
                                                                                                                                                                                                                                                        PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR000219; RhoGEF.
IPR000980; SH2.
IPR001452; SH3.
                                                                  ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN
                                                                                                                                                                                                                                                                     PS50001; SH2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PR001715; Calponin-like.
                                                                                                                                          843 AA;
                                                                                                                                                                         194
402
516
615
                                                                                                                                                  780
                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SH2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RhoGEF; 1.
                                                                                                                                          97953 MW;
                                                                                                      15.5%;
                                                                                            14; Mismatches
                                                                                                                                                    PHORBOL-ESTER I
SH3 1.
SH2.
SH2.
                                                                                                        Score 91.5; DB Pred. No. 0.12;
                                                                                                                                           C4A5CACD45FCB80E CRC64;
                                                                                                                     DB 1; Length 843;
                                                                                                                                                                                           AND DAG
                                                                                                20;
                                                                                                 Indels
                                                                                                                                                                                            BINDING
                                                                                                   13;
                                                                                                   Gaps
                                                        833
                                                                              85
```

RESULT 10
VAV MOUSE
ID VAV MOUSE
AC P27870;
DT 01-AUG-199;

P27870; 01-AUG-1992 (Rel. 23, Created)

STANDARD;

845

```
SEQUENCE FROM N.A.

MEDLINE=92228488; PubMed=1565462;

MEDLINE=92228488; PubMed=1565462;

Adams J.A., Houston H., Allen J., Lints T., Harvey R.;

Adams J.A., Houston H., Allen J., Lints T., Harvey R.;

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogene shares homology

"The hematopoietically expressed vav proto-oncogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-AUG-1992 (Rel. 23, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
MGD; MGI:98923; Vav1.

InterPro; IPR001715; Calponin-like.

InterPro; IPR003247; CH type.

InterPro; IPR003219; DAG PE-bind.

InterPro; IPR001313; GDS_CDC24.

InterPro; IPR001349; PH.

InterPro; IPR001849; PH.

InterPro; IPR0001219; RhoGEF.

InterPro; IPR000980; SH2.

InterPro; IPR001825; SH3.

InterPro; IPR001825; SH3.

InterPro; IPR001826; SM2_calponin.

Pfam; PF00307; CH; 1.

Pfam; PF00130; DAG_PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vav proto-oncogene
VAV1 OR VAV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Katzav S., Cleveland J.L., Heslop H.E., Pulido D., "Loss of the amino-terminal helix-loop-helix domain of the oncogene activates its transforming potential.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=20130290; PubMed=10662792;
Sosinowski T., Pandey A., Dixit V.M.,
"Src-like adaptor protein (SLAP) is a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-93 FROM N.A. MEDLINE=91172176; PubMed=2005887;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oncogene 7:611-618(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INTERACTION WITH SLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X64361; CAA45713.1; ... EMBL; M59833; AAA63402.1; ... PIR; A61187; TVMSVV. PDB; 1F5X; 15-SEP-00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSFAC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proliferation.
SUBUNIT: Interacts with SLA.
SUBUNIT: Interacts with SLA.
TISSUE SPECIFICITY: Widely expressed in hematopoietic cells |
TISSUE SPECIFICITY: Widely expressed in hematopoietic cells |
TISSUE SPECIFICITY: Widely expressed in hematopoietic cells |
TISSUE SPECIFICITY: Widely expressed in hematopoietic cells |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |
TISSUE SPECIFICATION |

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cell. Biol. 11:1912-1920(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1GCP; 28-JAN-03.
1GCQ; 28-JAN-03.
1K1Z; 18-DEC-02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    T01230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a negative regulator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Weiss A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proto-
```

```
밁
                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                    VAV3 MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE PSS0021; CH; 1.

PROSITE PS00479 DAG PE BIND |

PROSITE PS50081; DAG PE BIND |

PROSITE PS50010; DH 2; 1.

PROSITE PSS0010; DH 2; 1.

PROSITE PSS00103; PH DOMAIN; 1

PROSITE, PSS0003; PH DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS;
PRINTS;
PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00169; PH; 1.
Pfam; PF00621; RhoGEF; 1.
Pfam; PF00017; SH2; 1.
Pfam; PF00018; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00325; RhoGEF; 1.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                    Proto-oncogene; Phorbol-ester binding; Zinc; Guanine-nucleotide releasing factor; Repeat;
                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                       CONFLICT
                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                        16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                    Q9ROC8;
                                                                                                                                                                                                                                                                                                                                                                                                              D-structure.
                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                              Mus musculus (Mouse)
                                                                                                                               Vav-3 protein.
                                                                                                                         VAV3
                                                                                    VCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                            MOUSE
                                                                                                                                                                                                                        836 YVEED--YSE 843
                                                                                                                                                                                                                                       86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                         26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFFSN
                                                                                                                                                                                                                                                                                                                                                                                                                                       PS50001; SH2; 1.
PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                          AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN
                                                                                                                                                                                                                                                                                                                                29
845 1
                                                                                                                                                                                                                                                                                                                                                                                    194
402
                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SH2DOMAIN.
                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                  98136 MW;
                                                                                                                                                                                                                                                                                                       15.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BIND_DOM_1; 1.
BIND_DOM_2; 1.
                                                                                                                                                                                                                                                                                              14; Mismatches
                                                                                                                                                                                                                                                                                                       Score 91.5; DB pred. No. 0.12;
                                                                                                                                                                                                                                                                                                                                          Q -> E (IN REF.
                                                                                                                                                                                                                                                                                                                                                   SH3 2.
                                                                                                                                                                                                                                                                                                                                                                              PHORBOL-ESTER
                                                                                               Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                 3666DCCD1C5229DA CRC64;
                                                                                                                                                                                847 AA.
                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                 AND DAG BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                           Phosphorylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                    SH2 domain; SH3 domain;
                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                             2)
                                                                                                                                                                                                                                                                                                                  Length 845;
                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                    13;
                                                                                                     Mus.
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                   835
```

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDIINE=20179693; PubMed=10713454;

MEDLINE=20179693; PubMed=10713454;

Trenkle T., McClelland M., Adlkofer K., Welsh J.;

Trenkle T., McClelland M., Adlkofer K., Welsh J.;

Trenkle T., McClelland M., Adlkofer K., Welsh J.;

Major transcript variants of VAV3, a new member of the VAV family of
"Major transcript variants of FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA,
-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PR

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AF067816; AAF09171.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                             Pfam;
                                                                                                                                                                                                                                                                            SMART;
SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                SMART; SM00252; SH2; 1
SMART; SM00326; SH3; 2
                                                                                                                                                                                                                                                                    SMART;
                                                                                                                                                                                                                                                                                                             ProDom;
                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00888;
                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00452;
                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00401;
                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                         Ptam;
                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nterPro;
                                                                                                                                                                                        PROSITE;
                                                                                                                               Phorbol-ester binding; Zinc;
                                                                                                                                                      PROSITE;
                                            DOMAIN
                                                                            DOMAIN
                                                                                                  DOMAIN
                                                                                                            DOMAIN
                                                                                                                       Guanine-nucleotide releasing
                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: Contains 1 calponin-homology (CH) domain.
SIMILARITY: Contains 1 DBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    binding domain.
SIMILARITY: Contains 1 SH2 domain.
SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALTERNATIVE PRODUCTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGI:1888518; Vav3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=Q9R0C8-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                    PF00018; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IsoId=Q9R0C8-2; Sequence=Not described;
                                                                                                                                                                                                                                                                                                                                                                                          PF00621; RhoGEF; 1.
                                                                                                                                                                                                                                                               SM00109; C1; 1
SM00033; CH; 1
SM00233; PH; 1
                                                                                                                                          3; PS50021; CH; 1.
3; PS500479; DAG PE BIND_DOM_2; 1
3; PS50081; DAG_PE BIND_DOM_2; 1
3; PS50010; DH_2; 1.
3; PS5000741; DH_1; 1.
3; PS5000741; DH_0; 11.
3; PS50001; SH2; 1.
3; PS50001; SH2; 1.
                                                                                                                                                                                                                                                        SM00325; RhoGEF; 1
                                                                                                                                                                                                                                                                                                            PD001527; CH_type; PD000093; SH2; 1.
                                                                                                                                                                                                                                                                                                   PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR001715; Calponin-like IPR003247; CH type. IPR002219; DAG PE-bind.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR001331; GDS_CDC24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR001452;
                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR003096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR000980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR000219; RhoGEF.
                                  192
400
514
592
672
788
847
                                                                                                                                                                                                                                                                                                                                    SH3DOMAIN.
SM22CALPONIN.
                                                                                                                                                                                                                                                                                                                                                           SH2DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                 PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                       SM22_calponin.
                                    97946 MW;
   15.5%;
                                                                                                               factor;
CH.
                                             SH2
SH3
                                                                                                                                     SH2 domain; SH3 domain; Repeat;
   Score 91.5; DB Pred. No. 0.12;
                                                                               PHORBOL-ESTER
                                     9A6B63F0D9E60F8F CRC64;
                                               N
                                                                                                                          Alternative splicing.
                                                                                  DAG BINDING
                Length 847;
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            V HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P15498; Q15860;
01-APR-1990 (Rel. 14, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Katzav S., Cleveland J.L., Heslop H.E., Pulido D.; "Loss of the amino-terminal helix-loop-helix domain oncogene activates its transforming potential."; Mol. Cell. Biol. 11:1912-1920(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Katzav S., Martin-Zanca D., Barbacid
"vav, a novel human oncogene derived
expressed in hematopoietic cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Denkinger D.J., Borges C.R., Shaw C.L., Cushman A.M., Kawahara R. "Transcriptional regulation of the vav proto-oncogene."; Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VAV1 OR VAV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vav proto-oncogene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VAV HUMAN
                                                                                                                                                                              MEDLINE=92228488; PubMed=1565462;
Adams J.M., Houston H., Allen J., Lints T., Harvey R.;
"The hematopoietically expressed vav proto-oncogene shares homology with the dbl GDP-GTP exchange factor, the bcr gene and a yeast gene (CDC24) involved in cytoskeletal organization.";
                                                                                                                                                                                                                                                                                        MEDLINE=96038895; PubMed=7478592; Ramos-Morales F., Romero F., Schweighoffer F., Bismuth G., (Tortolero M., Fischer S.; "The proline-rich region of Vav binds to Grb2 and Grb3-3."; Oncogene 11:1665-1669(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 1-61 FROM N.A. MEDLINE=91172176; PubMed=2005887;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBO J. 8:2283-2290(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=90005432; PubMed=2477241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 62-845 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                               SIMILARITY TO CDC24 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 299-334 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                    Romero
                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 299-837 FROM N.A.
                                                                                                                                                                 Oncogene 7:611-618(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          790 LGIAIARYDFCARDMRELSLLKGDMVKIYTKM----SANGWWRGEVNGR------
                              PTM: Phosphorylated on tyrosine MISCELLANEOUS: 'Vav' stands for
                                                            TISSUE SPECIFICITY: WIDELY EXPRESSED IN HEMATOPOIETIC CELLS NOT IN OTHER CELL TYPES
                                                                                                        proliferation. SUBUNIT: Interacts with SLA (By similarity). Interacts with Grb2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               839 PSTYVEE 845
                                                                                                                                      \overline{	ext{FUNCTION}}: Couples tyrosine kinase signals with the activation of the Rho/Rac GTPases, thus leading to cell differentiation and/or
   alphabet.
SIMILARITY: Contains 1 calponin-homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 ISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYF 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83 PSNLVKE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            845 AA.
                                      the sixth letter of the Hebrew
                                                    residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from a locus ubiquitously
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21;
         (H
                                                                                                                                                                                                                                                                                                                                                Bismuth G., Camonis J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of the vav proto-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         838
```

```
EMBL; AF030227; AAC25011.1; (EMBL; AF030201; AAC25011.1; J(EMBL; AF030202; AAC25011.1; J(EMBL; AF030203; AAC25011.1; J(EMBL; AF030204; AAC25011.1; J(EMBL; AF030205; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AAC25011.1; J(EMBL; AF030206; AEC25011.1; J(EMBL; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation between the Bioinformatics Institute. There are no restrictions on its the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SIMILARITY: Contains 1 DBL-homology (DH) domain.
-!- SIMILARITY: Contains 1 PH domain.
-!- SIMILARITY: Contains 1 zinc-dependent phorbol-ester and binding domain.
-!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
-!- SIMILARITY: Contains 2 SH3 domains.
InterPro; IPR003096; SW22_calponin.

Pfam; PF00307; CH; 1.

Pfam; PF00130; DAG PE-bind; 1.

Pfam; PF00169; PH; 1.

Pfam; PF00621; RhoGEF; 1.

Pfam; PF00017; SH2; 1.

Pfam; PF00018; SH3; 2.

PRINTS; PR00451; SH2DOMAIN.

PRINTS; PR00452; SH3DOMAIN.

PRINTS; PR00888; SM22CALPONIN.

PRINTS; PR00888; SM22CALPONIN.

PRODOm; PD001527; CH_type; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; M59834; AAA63267.1; -.
EMBL; X83931; CAA58783.1; -.
PIR; B39576; TVHUVV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GO; GO:003700; F:transcription factor activity; TAS.
GO; GO:0007048; P:oncogenesis; TAS.
InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH type.
InterPro; IPR003247; CH type.
InterPro; IPR00331; GDS_CDC24.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001331; GDS_CDC24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRANSFAC; T00880; -.
Genew; HGNC:12657; VAV1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF030226; AAC25011.1; JOINEU.
EMBL; X16316; CAA34383.1; ALT_FRAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; P29354; 1GRI.
                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000219; RhoGEF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in position 322 and 355.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     164875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF030207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                201, AAC25011.1; JOINED.
202, AAC25011.1; JOINED.
203, AAC25011.1; JOINED.
204, AAC25011.1; JOINED.
205, AAC25011.1; JOINED.
206, AAC25011.1; JOINED.
207, AAC25011.1; JOINED.
208, AAC25011.1; JOINED.
209, AAC25011.1; JOINED.
2010, AAC25011.1; JOINED.
2011, AAC25011.1; JOINED.
2012, AAC25011.1; JOINED.
2013, AAC25011.1; JOINED.
2014, AAC25011.1; JOINED.
2015, AAC25011.1; JOINED.
2016, AAC25011.1; JOINED.
2017, AAC25011.1; JOINED.
2018, AAC25011.1; JOINED.
2019, AAC25011.1; JOINED.
2020, AAC25011.1; JOINED.
2021, AAC25011.1; JOINED.
2021, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2022, AAC25011.1; JOINED.
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        shown due to frameshifts
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                         VAV3
                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00479; DAG_PE_BIND_DOM_1; 1.

R PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.

R PROSITE; PS50010; DH_2; 1.

PROSITE; PS000741; DH_1; 1.
                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD000066; SH3; 1.
SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
SMART; SM00023; PH; 1.
SMART; SM00325; RH0GEF; 1.
SMART; SM00325; SH2; 1.
SMART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS50002; SH3;
                                                                                                                                                                                                                                                                                                                                              HUMAN
VAV3_H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Guanine-nucleotide releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                              O9UKW4; O95230; Q9Y5X8;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
TISSUE-Breast, and Colon carcinoma;
TISSUE-Breast, and Colon carcinoma;
MEDLINE=98371222; PubMed=9705494;
Trenkle T., Welsh J., Jung B., Mathieu-Daude F., McClelland M.;
Trenkle T., Welsh J., Jung B., Mathieu-Daude For CDNA arrays.";
Non-stoichiometric reduced complexity probes for CDNA arrays.";
Nucleic Acids Res. 26:3883-3891(1998).
Nucleic Acids Res. 26:3883-3891(1998).
TO A LESSER EXTENT, RAC-1. BINDS PHYSICALLY TO THE NUCLEOTIDE STATES OF THOSE GTPASES.
                                                                                                                                               SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
MEDLLNE=99455043; PubMed=10523675;
MEDVILL N., Bustelo X.R.,
"Biological and regulatory properties of Vav-3, a new member of the
"Biological and regulatory properties of Vav-3, a new member of the
Vav family of oncoproteins.";
                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                                                                                                                                                                                                                                                   Vav-3 protein.
                                                                                                                                                                                                                      NCBI_TaxID=9606;
                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                              HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                            836
                                                                                                                                                                                                                                                                                                                                                                                                                                                             787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                   86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PD000066; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PS50001; SH2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                            YVEED--YSE 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AKARYDECARDRSELSLKEGDIİ----KILNKKGQQGWWRGEIYGR-----VGWEPAN 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            845 AA;
                                                                                                                                     Biol. 19:7870-7885(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phorbol-ester
                                                                                                                                                                                                                                       Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98313 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15.1%;
                                                                                                                                                                                               AND ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g factor;
CH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 89.5; Di
Pred. No. 0.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PHORBOL-ESTER
SH3 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A -> P (IN REF. .
I -> TV (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SH3 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      binding; Zinc; SH2 domain; SH3 domain;
factor; Repeat; Phosphorylation.
                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC3BC9736FD2F138
                                                                                                                                                                                                                                                                                                                                                      847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DAG BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 845;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                RHOA, RHOG AND, NUCLEOTIDE-FREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/entities requires a license agreement (See http://www.isb-sib.ch/announce/entities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF118887; AAD20349.1; -.
EMBL; AF118886; AAD20348.1; -.
EMBL; AF067817; AAC79895.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genew; HGNC:12659; VAV3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001715; Calponing InterPro; IPR001247; CH type. InterPro; IPR0012219; DAG PE-Din InterPro; IPR001311; GDS_CDC24. InterPro; IPR001849; PH. InterPro; IPR000219; RhGGEF. IPR000219; RhGGEF.
                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG_PE-bind
Pfam; PF00169; PH; 1.
Pfam; PF00621; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro, IPR000980; SH2.
InterPro, IPR001452; SH3.
InterPro, IPR003096; SM22_calponin.
                                                                                                                                                                                                                     SMART; SM00325; RhoGEF; 1
SMART; SM00252; SH2; 1
SMART; SM00326; SH3; 2
                                                                                                                                                                                                                                                           SMART; SM00109; C1; 1
SMART; SM00033; CH; 1
SMART; SM00233; PH; 1
                                                                                                                                                                                                                                                                                                                                            PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                   Pfam;
                                                                                                                                               PROSITE; PS00479; DAG PE BIND DOM 1; PROSITE; PS50081; DAG PE BIND DOM 2; PROSITE; PS50010; DH 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                       Pfam;
                                                                                                                                                                                                                                                                                                       ProDom;
                                                                                                                                                                                                                                                                                                                  ProDom;
                                                                                                                                                                                                                                                                                                                                 ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ISOId=Q9UKW4-2; Sequence=VSP 001820;
SIMILARITY: Contains 1 calponin-homology (CH) domain.
SIMILARITY: Contains 1 DBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 zinc-dependent phorbol-ester and binding domain.
                                                                                                                                                                                                         PROSITE;
                                                                                  Guanine-nucleotide
                                                                                               Phorbol-ester binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  send an email to license@isb-sib.ch).
                            DOMAIN
                                          DOMAIN
                                                       DOMAIN
                                                                                                             PROSITE; PS50002; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Event=Alternative splicing; Named isoforms=2; Name=Alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GO.0005096; F:GTPase activator activity; TAS. GO.0005070; F:SH3/SH2 adaptor protein activity; TAS. GO:0005070; F:SH3/SH2 adaptor protein activity; TAS. GO:0007264; P:small GTPase mediated signal transduct GO:0007264; P:small GTPase mediated signal transduct erpro; IPR001715; Calponin-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IsoId=Q9UKW4-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                       PF00017; SH2; 1. PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                      PRO0888; SM22CALPONIN.
PRO01527; CH type: 1.
PD000093; SH2; 1.
PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                         PRO0401; SH2DOMAIN.
PR00452; SH3DOMAIN.
                                                                                                                        PS50001; SH2;
                                                                                                                                       PS50003; PH_DOMAIN; 1.
    1
192
400
514
592
672
                                                                                                                                                                                                                                                                                                                                                                                                                                                PE-bind; 1.
     119
371
502
562
660
766
                                                                                      releasing
                                                                                                    Zinc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PE-bind.
                                                             factor;
CH.
DH.
       PHORBOL-ESTER AND DAG BINDING SH3 1. SH2.
                                                                                        SH2 domain; SH3 domain; Repeat;
factor; Alternative splicing.
                                                PH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      signal transduction; TAS
```

```
SOR
뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
VAV2_M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q60992;
01-NOV-1997 (Rel. 35,
01-NOV-1997 (Rel. 35,
28-FEB-2003 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VAV2 MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vav-2 protein.
                                                                                                                                                                                                                                                                                                                                                     Oncogene 13:363-371(1996).
-!- FUNCTION: Guanine nucleotide exchange factor for the Rho family
                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=96313271; PubMed=8710375;
Schuebel K.E., Bustelo X.R., Nielsen D.A., Song B.J., Barbacid M.,
                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it the by non-profit institutions as long as its content is in no was use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce.entities.edu...)
                                                                                                                                                                                                                                                                                                                                                                  family of proto-oncogenes."; Oncogene 13:363-371(1996).
                                                                                                                                                                                                                                                                              -:- SIMILARITY: Contains 1 calponin-homology
-:- SIMILARITY: Contains 1 DBL-homology (DH)
-:- SIMILARITY: Contains 1 PH domain.
-:- SIMILARITY: Contains 1 zinc-dependent pho
                                                                                                                                                                                                                                                                                                                                                                                                             Goldman D., Lee I.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                        -!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
                                                                                                                       or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                              Isolation and characterization of murine vav2, a member of the vav
 InterPro; IPRO01715; Calponin-like.
InterPro; IPRO03247; CH type.
InterPro; IPRO032219; DAG per-bind.
InterPro; IPRO01331; GDS CDC24.
InterPro; IPRO01331; GDS PH.
                                                                                                EMBL; U37017; AAC52761.1; -.
                                                                    HSSP; Q60631; 1GBQ
MGD; MGI:102718; V
                                                                                                                                                                                                                                                                                                                                        of Ras-related GTPases (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 839 PSTYVEE 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       790 LGIAIARYDFCARDMRELSLLKGDVVKIYTKM----SANGWWRGEVNGR------VGWF
                                                                                                                                                                                                                                                                     binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23 ISLARAQEDYNAFDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYF 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSNLVKE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         847 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       788
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41, Last annotation update)
                                                                         Vav2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CETFGMRKSELFEAFDLFDVRDFGK -> M(
P (in isoform Beta).
/FTId=VSP 001820.
K -> E (IN REF. 2).
Y -> H (IN REF. 1; AAD20348).
T -> S (IN REF. 2).
V -> A (IN REF. 1; AAD20348).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 89.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEPWKQCAQWLIHCKVLPTNHRVTWDSAQVFDLAQTLRDGV
LLCQLLNNLRAHSINLKEINLRPQMSQFLCLKNIRTFLTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C1E29F0B094CB721 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                         phorbol-ester and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21;
                                                                                                                                                                                                                                                                                                                          domain
                                                                                                                                                                                                                                                                                                                                     (CH) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MQLPDCPCRAHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                a collaboration
MBL outstation -
                                                                                                                                                                                                                                                                                                 DAG
                                                                                                                                                                     commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
```

```
RESULT 15
VAV2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
REACT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPANT OCCUPA
                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pfam; pro0017; SH2; 1.
pfam; pro0018; SH3; 2.
pfam; pro0018; SH3; 2.
pfam; pro0018; SH3; 2.
prim; pro0052; SH3DOMAIN.
prints; pro0452; SH3DOMAIN.
proDom; pD001527; CH type; 1.
proDom; pD000093; SH2; 1.
proDom; pD000066; SH3; 2.
sMART; SM00109; C1; 1.
sMART; SM00033; CH; 1.
sMART; SM00233; PH; 1.
sMART; SM00233; PH; 1.
sMART; SM00252; SH2; 1.
sMART; SM00325; SH2; 1.
sMART; SM00325; SH2; 1.
sMART; SM00325; SH2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS50021; CH; 1.

PROSITE; PS00479; DAG_PE_BIND_DOM_1; 1.

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS500741; DH 1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS50003; PH_DOMAIN; PROSITE; PS50001; SHZ; 1. PROSITE; PS50002; SH3; 2. Phorbol-ester binding; Zinc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nterPro; IPR001452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                    VAV2 HUMAN
P52735;
01-OCT-1996
01-OCT-1996
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Guanine-nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phorbol-ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                           Vav-2 protein.
                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF00130; DAG_PE-bind; 1.
PF00169; PH; 1.
PF00621; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                 852 GRIGWFPSTYVEEEGV 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                         802
                                                                                                                                                                                                                                                                                                                                                                                                      77 GIVGYFPSNLVKEQRV 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR000219; RhoGEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                     VFTPRVIGTAVARYNFAARDMRELSLREGDVVKIYSRIGGDQG----WWKG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VYT---ISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEM 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                868 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                    (Rel. 34, Created)
(Rel. 34, Last sequence up
(Rel. 41, Last annotation
                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99915 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; SH2 domain; SH3 (
g factor; Repeat; I
CH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 85.5; DB 1;
Pred. No. 0.52;
9; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PHOSPHORYLATION (BY EGFR)
SIMILARITY).
PHOSPHORYLATION (BY EGFR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PHOSPHORYLATION (BY EGFR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PHORBOL-ESTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D18581E7EEB2DBC2
                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                      878 AA
                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND DAG BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain;
Phosphorylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                w
```

SEQUENCE FROM N.A.

PROSITE;

binding;

2.
zinc; SH2 domain;

SH3

PH_DOMAIN; 1. SH2; 1. SH3; 2.

```
PRINTS; PRO0452; SHIDOWAIN.

PRODOM; PRO01527; CH_type; 1.

PRODOM; PD000093; SH2; 1.

PRODOM; PD000066; SH3; 2.

SMART; SM00109; C1; 1.

SMART; SM00033; CH; 1.

SMART; SM00033; CH; 1.

SMART; SM00233; PH; 1.

SMART; SM00232; RDGGEF; 1.

SMART; SM00252; SH2; 1.

SMART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PHOSPHORYLATION OF TYR-142; TYR-159 AND TYR-172.

MEDLINE=22464432; PubMed=12454019;

Tamas P., Solti Z., Bauer P., Illes A., Sipeki S., Bauer A.,

Tamas P., Solti Z., Buday L.;

Farago A., Downward J., Buday L.;

"Mechanism of epidermal growth factor regulation of Vav2, a guanine nucleotide exchange factor for Rac.";

J. Biol. Chem. 278:5163-5171(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Henske E.P., Short M.P., Jozwiak S., Bovey C.M., Ramlakhan S.,
Haines J.L., Kwiatkowski D.J.;
"Identification of VAV2 on 9934 and its exclusion as the tuberous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Brain;
MEDLINE=95283235; PubMed=7762982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ann. Hum. Genet. 59:25-37(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sclerosis gene TSC1.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -i- SIMILARITY: Contains 1 calponin-homology (CH) domain.
-i- SIMILARITY: Contains 1 DBL-homology (DH) domain.
-i- SIMILARITY: Contains 1 PH domain.
-i- SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Biol. Chem. 278:5163-5171(2003).
-[- FUNCTION: Guanine nucleotide exchange factor of Ras-related GTPases.
-[- TISSUE SPECIFICITY: Widely expressed.
                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000219; RhoGEF.
InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
Pfam; PF00307: CH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; 876992; AAB34377.1; -. PIR; I51940; I51940. HSSP; P08631; IBU1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SIMILARITY: Contains 1 SH2 domains
                           PROSITE; PS50021; D
PROSITE; PS00479; D
PROSITE; PS50081; D
PROSITE; PS50010; D
PROSITE; PS50001; D
PROSITE; PS50003; E
PROSITE; PS50001; S
                                                                                                                                                                                                                                                                 PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIM; 600428;
                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genew; HGNC:12658; VAV2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [nterPro;
                                                                                                                                                                                                                                                                                                             Pfam;
                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                                                                                                                                                                                                                          Pfam;
                                                                                                                                                                                                                                                                                                                                                        Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           binding domain.
                                                                                                                                                                                                                                                                                               PF00017; SH2; 1. PF00018; SH3; 2.
                                                                                                                                                                                                                                                                                                                                          PF00169; PH;
                                                                                                                                                                                                                                                                                                                                                         PF00130; DAG_
                                                                                                                                                                                                                                                                                                                            PF00621; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR003247; CH_type.
IPR002219; DAG PE-bind.
IPR001331; GDS_CDC24.
                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR001849;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR001715; Calponin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contains 1 SH2 domain
                                                        DAG PE BIND DOM 1; 1
DAG PE BIND DOM 2; 1
DH 2; 1.
                                                                                                                                                                                                                                                                                  SH2DOMAIN
                                                                                                                                                                                                                                                                                                                                                              PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                    PH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for the
```

```
KW Guanine-nucleotide releasing factor; Repeat; Phosphorylation.

FT DOMAIN

1 198 376
DH.

FT DOMAIN

405 512
PHORBOL-ESTER AND DAG BINDING.

FT DOMAIN

586 652
SH3 1.

FT DOMAIN

586 652
SH3 1.

FT DOMAIN

673 767
SH3 2.

FT DOMAIN

673 767
SH3 2.

FT DOMAIN

674 142
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 172
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 172
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 172
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 172
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

172 172
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

172 172
PHOSPHORYLATION (BY EGFR).

FT MOD RES

142 142
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

143 1.

144 2 142
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

144 2 142
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

144 2 142
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD RES

159 159
PHOSPHORYLATION (BY EGFR).

FT MOD
```

```
Database :
                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
                                                                                                                                                                                                  SPTREMBL 23:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-26
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December 29, 2003, 16:03:18 ; Search time 16.9468 Seconds (without alignments) 1674.996 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                              830525 seqs, 258052604 residues
                                                     99:
110:
112:
143:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
sp_mammal:*
sp_organelle:*
sp_organelle:*
sp_plant:*
sp_plant:*
sp_virus:*
sp_vertebrate:*
sp_vertebrate:*
sp_vertebrate:*
sp_vertebrate:*
sp_vertebrate:*
sp_vertebrate:*
sp_vertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                  830525
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

S
⊆
3
マ
⋝
×
н
m

115 155 155	13	10	vω	7 6	ហេរ	u a	2	1	Result No.
86.5 82.5	91.5 91.5	91.5 91.5	111 91.5	155.5	179.5	218 182	218	231.5	Score
14.6 14.0	15.5	15.5 15.5	18.8 15.5	26.3	30.4	36.9	36.9	39.2	Query Match
839 259	84.5	287 806	166 166	119	00	1239	268	96	Length
13 10	13	11	11	11	13	12	11	11	B
Q96037 Q800X5 Q8RZZ8	Q8BTV7 Q8UUX6	Q8R076 Q8VDU4	Q8C899 008526	Q91ZV0	Q90XF1	Q8BI84	Q8BJE9	09JI09	ID
Q96d37 nomo sapien Q8uux5 gallus gall Q8rzz8 oryza sativ	Q8btv7 mus musculu Q8uux6 gallus gall		Q8c899 mus musculu C08526 mus musculu	Q96pc5 homo sapien Q91zv0 mus musculu	Q90xf1 tetraodon n	Q8bi84 mus musculu	-	O9iiO9 mesocricetu	Description

45	44	43	42	41	40	39	38	37	36	<u>ي</u> 5	34 4	ω G	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
72.5	72.5	72.5	73	73.5	74	74	4	74.5	1 D	75.5	76	76	. 76	76	76	77.5	78	78	78	79	80	80	80.5	18	:	81.5	81.5	82
12.3		12.3	٠	12.4		2		'n	•	12.8			•			13.1			13.2		13.5	٠					13.8	
663	650	304	994	533	621	355	1097	839	514	498	641	479	479	352	352	635	1430	1257	630	638	643	344	636	615	1215	1196	1196	827
10	10	10	S	v	10	10	S	10	10	4	10	10	10	10	10	10	ຫ	ഗ	0	10	0	10	10	10				13
Q9FE96	Q9LL57	Q9FTG1	Q93575	OIYMBQ	Q9FTF3	Q94EK0	Q9U2T9	Q94F88	Q8S003	Q9H803	Q9ATQ6	TAXS6D	Q43366	Q94EK5	Q94EK2	Q9FU01	Q9VMA7	Q9VMA8	Q9ARM8	Q9ATQ5	Q9FU04	Q9FU07	Q9FTZ8	Q94E30	077202	Q8N157	Q9H0H2	Q8UWE6
oryza sat	sat	Q9ftg1 oryza sativ	Q93575 caenorhabdi		Q9ftf3 oryza sativ	Q94ek0 allium sati	Q9u2t9 caenorhabdi	Q94f88 arabidopsis	Q8s003 oryza sativ	Q9h803 homo sapien	triticu	allium	Q43366 allium cepa	Q94ek5 allium wake	allium	Q9fu01 oryza sativ		Q9vma8 drosophila	oryza sat	tritio		oryza	oryza	oryza	O77202 acanthamoeb	homo	Q9h0h2 homo sapien	Q8uwe6 tetraodon n

ALIGNMENTS

67

SYYGDHQDEMGI-VGYFPSNLVKEQRVYQEATKEIPT 102

```
1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

1088184

108
      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
Q8BJE9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID ACCOME DIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                Query Match
Best Local Similarity
                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                     the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annot 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6J; TISSUE=Retina;
MEDLINE=22354683; PubMed=12466851;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Weakly similar to NPIP-like protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence updat
01-MAR-2003 (TrEMBLrel. 23, Last annotation upd
Weakly similar to NPIP-like protein (Fragment).
                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8BI84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q85184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Eye;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QввлЕ9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QBBJE9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOCAT
                                                                                                                                                                                             AK044749; BAC32064.1; -. 
VCE 1239 AA; 136350 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK084344; BAC39164.1; -. 268 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83 LELWAGSV--EHS----FGYFPKDLIKVLHKYTEEELHIPADETDFVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28 HG---RRFSDLKVCGDEECSMLMYRGKALEDFTGPDCRFVNFKKGDDVYVYYKLA--GGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               58
                                                                     46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 36.9%; Score 218; DB 11; Length 268; Similarity 42.2%; Pred. No. 1.6e-15; 46; Conservative 13; Mismatches 38; Indels 17
HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          268 AA;
                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29722 MW; 67339C562F684402 CRC64;
                                                                                                36.9%; Score 218; DB 11; Length 1239; 42.2%; Pred. No. 1e-14;
                                                                  13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT; 1239 AA.
                                                               Mismatches
                                                                                                                                                                                                6E16F9D42ECEFF05 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268 AA
                                                                                                                                                                                                                                                                                                                        on functional annotation of
                                                               38; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels 12;
                                                               12;
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
AC DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SO DRAFT OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPANTO OCCUPAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; BC009815; AAH09815.1; -. WGD; MG3:109615; Cdrap. InterPro; IPR001452; SH3. Pfam; PR00018; SH3; 1. SMART; SM00326; SH3; 1. SMART; SM00326; SH3; 1. SEQUENCE 137 AA; 15441 MW; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MR-2003 (TrEMBLrel. 23, Last annotation update)
Melanoma inhibitory activity protein (Fragment).
Tetraodon nigroviridis (Green puffer).
Tetraodon nigroviridis (Green puffer).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetradontoidea; Tetraodontidae; Tetraodon.
                                                                                                                                         Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AF390176; AAL26991.1; -. InterPro; IPR001452; SH3. Pfam; PF00018; SH3; 1.
     SEQUENCE
                                                             NO
NO
NO
                                                                                           SMART; SM00326; SH3;
                                                                                                                                                                                                                                                                                                                                            Bosserhoff A.K., Buettner R.; "Characterization of the MIA gene family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=99883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q90XF1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q90XF1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similar to cartilage derived retinoic acid sensitive protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q921X3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDRAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26 MPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64 WAGSV 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83 LELWAGSV--EHS-----FGYFPKDLIKVLHKYTEEELHIPADETDFVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCREIDVKKGQQIYVYSKLVTENGAGE-F 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of Similarity 56.9%; Pred. No. 5.8e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WGGSV 87
88 AA; 10080 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9; Mismatches 15;
C355C1FE04DA22EA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        971415552E6FD536 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
```

Query Match Best Local Similarity

30.4%;

Score 179.5; DB 1 Pred. No. 6.3e-12;

DB 13;

Length 88;

```
RESULT 7
Q91ZV0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SO OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF
                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 36
              Matches
                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q912V0;
Q912V0;
01-DEC-2001 (TrEM5Lrel. 19, Created)
01-DEC-2001 (TrEM5Lrel. 19, Last sequence update)
01-DEC-2003 (TrEM5Lrel. 23, Last annotation update)
01-MAR-2003 (TrEM5Lrel. 23, Last annotation update)
Melanoma inhibitory activity protein 2.
Mus musculus (Mouse)
Mus musculus (Mouse)
                                                                                                                                                                                         TISSUBEEmbryo;
Bosserhoff A.K., Buettner R.;
"Characterization of the MIA gene family.";
"Characterization to the EMBL/GenBank/DDBJ databases.
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF390177; AAL26992.1; -.
                                                                                                                              SEQUENCE
                                                                                                                                                   InterPro; IPR001452; SH3. SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q96PC5;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Characterization of the MIA gene family.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL, AF390175; AAL26990.1; -.
Interpro; IPR001452; SH3.
SMART, SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bosserhoff A.K., Buettner R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Embryo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Melanoma inhibitory activity protein Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q96PC5
                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26
              36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84 KGKE-----FGYFPRDAVQIEEVFISEEIQMSTKESDFLC 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68 VYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58 - IGHFPSSIVEETHPLMAAQTEVKTSNWDFYC 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78 IVGYFPSNLVKEQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 LSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGS 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LADLKKCGDLECEALINRVSAMRDYRGPDCRYLNFTKGEEISVYVKLAGER--EDLWAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMIARALQDYYPADCXFIPIRQGQLIYVYAML---KGRGSQFWAGSVQDSYYGQQEAR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAG-EFWAGSV----YGDHQDEMG 77
                                                                                                                           119 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119 AA;
              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13535 MW; AEF529762D880AC5 CRC64;
                                                                                                                           13397 MW; 589F390C0B49D1C7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Buteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27.8%;
        26.3%; Score 155.5; DB 1
35.3%; Pred. No. 3.7e-09;
tive 15; Mismatches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 164.5; DB 4
Pred. No. 3.9e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                          DB 11; Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11;
        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57
     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
Q8C899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCOUNT DE LACCOURT DE LACCOURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COURT DE LA COUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                       InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
Pfam; PF00017; SH2; 1.
                                                                                                                                                                 Okumura K., Kaneko Y., Nonogushi K., Nishiyama H., Yokoi H., Higuchi T., Itoh K., Yoshida O., Miki T., Fujita J.; "Expression of a novel isoform of Vav, Vav-T, containing a single Srchomology 3 domain in murine testicular germ cells.";
                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN=ddy; TISSUE=Testis;
STRAIN=ddy; TISSUE=Testis;
MEDLINE=97190224; PubMed=9038379;
                                                                                                         HSSP; Q60631; 1GBQ.
MGD; MGI:98923; Vav.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs."; Nature 420:563-573 (2002).

EMBL; AK047965; BAC33202.1; -.

EMBL; AK047965; BAC33202.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2003 (TrEMBLrel. 23,
01-MAR-2003 (TrEMBLrel. 23,
01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUL-1997
01-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    008526;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 008526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Head; MEDLINE=22354683; PubMed=12466851; The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Otoraplin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8C899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8C899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19 HGVFMDKLSSKKLCADEECVCKALLTVWFSLSFYHIMGNLSGKQPDC 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84 KGKD-----FGYFPRDAVQIEEVFISEEIQMSTKESDFLC 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68 VYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 HGVFMDKLSSKKLCADEECV-----YTISLARAQEDYNA--PDC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 LSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGS 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAHLKKCGDLECETLISRVLALRDYTGPDCRYLNFTTGEEISVYVKLGGDR--EDLWAGS 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. 04, Created)
(TrEMBLrel. 04, Last sequence update)
(TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Mouse)
SH2;
SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 111; DB 11; Length 68; Pred. No. 0.00013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus
```

of.

2

```
RESULT 11
Q8VDU4
ID Q8VDU
AC Q8VDU
DT 01-MA
DT 01-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
Q8R076
                                                                                    밁
                                                                                                   S
                                                                                                                            В
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SORRERE
                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                            Query Match
                                                                                                                                                                                                           MGD; MGI:188518; Vav3.
InterPro; IPR001980; SH2.
InterPro; IPR001452; SH3.
Pfam; PF00017; SH2; 1.
ProDom; PD000066; SH3; 1.
ProDom; PD000066; SH3; 1.
SWART; SM00252; SH3; 2.
SMART; SM00326; SH3; 2.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50002; SH3; 2.
Hypothetical protein.
SEQUENCE 287 AA; 32662 MW; B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR00452; SH3DOMAIN.
ProDom; PD000093; SH2; 1.
ProDom; PD0000066; SH3; 1.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 1.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50002; SH3; 1.
                     Q8VDU4;
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence up
01-MAR-2003 (TrEMBLrel. 23, Last annotation
Hypothetical 32.7 kDa protein.
VAV3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8R076;
                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                           Strausberg R.;
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases
Submit BC027242; AAH27242.1; -.
                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y Match 15.5%; Score 91.5; DB 11; Length 166; Local Similarity 32.9%; Pred. No. 0.05;
                                                                                                                                                                                 Local
                                                                                    279 PSTYVEE 285
                                                                                                                            230 LGIAIARYDFCARDMRELSLLKGDMVKIYTKM----SANGWWRGEVNGR------VGWF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                157 YVEED--YSE 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108 AKARYDFCARDRSELSLKEGDIÏ----KILNKKGQQGWWRGEIYGR-----IGWFPSN 156
                                                                                                       83 PSNLVKE 89
                                                                                                                                               23 ISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYF 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
                                                                                                                                                                  ch 15.5%; Score 91.5; DB 11; Length 287; Similarity 32.8%; Pred. No. 0.097; 22; Conservative 13; Mismatches 21; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           166 AA; 19434 MW;
(TrEMBLrel. 20, Created)
(TrEMBLrel. 20, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14; Mismatches 20; Indels 13;
Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
                                                                                                                                                                                                               BF2850B8F921F048 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2C3AF1FF07A5018F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85
                                                                                                                            278
                                                                                                                                   Ś
                                                                                                                 밁
                                                                                                                                                         밁
                                                                                                                                                                            S
```

```
RESULT 12
Q8BTV7
ID Q8BTV
AC Q8BTV
DT 01-MA
DT 01-MA
DT 01-MA
DT 01-MA
DT VAV p
OS Mus m
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00479; DAG PE BIND DON PROSITE; PS50081; DAG PE BIND DON PROSITE; PS500741; DH 1; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50001; PH DOMAIN; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00109; C1; 1.
SMART; SM002033; CH; 1.
SMART; SM00233; PH; 1.
SMART; SM00225; RhoGEF; 1.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 2.
                                01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23,
  VAV proto-oncogene. Mus musculus (Mouse).
                                                                                                Q8BTV7;
                                                                                                                      Q8BTV7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00452; SH3DOMAIN.
PRINTS; PR00888; SW22CALPONIN.
ProDom; PD0001527; CH type; 1.
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00307; CH; 1.
Pfam; PF00307; CH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00169; PH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001452; SH3.
InterPro; IPR003096; SM22_calponin.
Pfam; PF03915; AIP3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similar to vav oncogene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; BC020487; AAH20487.1; -. MGD; MGI:98923; Vav.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- SIMILARITY: CONTAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ICBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nterPro;
                                                                                                                                                                                                                      797
                                                                                                                                                                                                                                                                                           748 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF00017;
                                                                                                                                                                                                                                                         86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                  26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                         h 15.5%; Score 91.5; DB 11; Length 806;
Similarity 32.9%; Pred. No. 0.34;
23; Conservative 14; Mismatches 20; Indels 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR005613; AIP3.
IPR001715; Calponin-like.
IPR003247; CH type.
IPR0032219; DAG PE-bind.
IPR001331; GDS_CDC24.
                                                                                                                                                                                                                  YVEED--YSE 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR000219; RhoGEF.
IPR000980; SH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR001849; PH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (JAN-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                       806 AA;
                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SH2; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>유</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                       93868 MW; F4368CD13A62D695 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BIND_DOM_1; 1.
BIND_DOM_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PH DOMAIN
                              Created)
Last sequence update)
Last annotation update)
                                                                                                                  845 AA
                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

SOR REPRESENTATION OF THE PROPERTY OF THE PROP

```
RESULT 13
Q8UUX6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Vav3 Modulates B Cell Receptor Responses by Regulating Phosphoinositide 3-Kinase Activation.";

J. Exp. Med. 195:189-20(2002).

C -!- SIMILARITY: CONTAINS 2 SH3 DOMAINS.

-!- SIMILARITY: CONTAINS 1 PH DOMAIN.

EMBL; AY046915; AAL06249.1; --

R InterPro; IPR001715; Calponin-like.

InterPro; IPR003247; CH type.

InterPro; IPR003247; CH type.

InterPro; IPR003219; DAG PE-bind.

InterPro; IPR001331; GDS CDC24.

InterPro; IPR001349; PH.—

InterPro; IPR001849; PH.—

INTERPO; IPR001849; PH.—

INTERPO; IPR001849; PH.—

INTERPO; IPR001849; PH.—
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                         Pfam; PF00307; CH; 1.

Pfam; PF00130; DAG PE-bind; 1.

Pfam; PF00169; PH; 1.

Pfam; PF001621; RhoGEF; 1.

Pfam; PF00018; SH2; 1.

Pfam; PF00018; SH3; 1.

Pfam; PF00018; SH3; 1.

PRINTS; PR00401; SH3DOMAIN.

PRINTS; PR00688; SM22CALPONIN.

PRODOM; PD001127; CH type; 1.

ProDom; PD001127; CH type; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The FANTON Consortium,
The FANTON Consortium,
The FANTON Consortium,
The FANTON Consortium,
The FANTON Consortium,
The FANTON CONSORTIUM
The FANTON CONSORTIUM
The FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSORTIUM
THE FANTON CONSOR
                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001452; SH3.
InterPro; IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
GDP/GTP exchange factor VAV3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8UUX6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=11805146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=NOD; TISSUE=Thymus;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inabe K., Ishiai M., Scharenberg A.M., Freshney N., Downward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      836 YVEED -- YSE 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19; RhoGEF.
80; SH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15.5%; Score 91.5; DB 32.9%; Pred. No. 0.36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          846 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 11; Length 845;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20; Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85
                      AID
DITION OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
Q96D37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SIMILARITY: CONTAINS 2 SH3 DOMAINS.
-!- SIMILARITY: CONTAINS 1 PH DOMAIN.
EMBL; BC013361; AAH13361.1; -.
InterPro; IPR002219; DAG_PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001849; PH.
InterPro; IPR001849; PH.
InterPro; IPR000219; RhoGEF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS50021; CH; 1.

PROSITE; PS00479; DAG PE_BIND_DOM 1; 1.

PROSITE; PS50081; DAG PE_BIND_DOM_2; 1.

PROSITE; PS50081; DAG PE_BIND_DOM_2; 1.

PROSITE; PS50010; DH_2; 1.

PROSITE; PS50003; PH_DOMAIN; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50002; SH3; 2.
                                                                                ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
SMART; SM00109; C1; 1.
SMART; SM00233; PH; 1.
SMART; SM00235; RhoGEF; 1.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
Pfam; PF00130; DAG PB-bind; 1.
Pfam; PF00169; PH; 1.
Pfam; PF00018; SH3; 1.
Pfam; PF00018; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom, PD000066; SH3; 1.
SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
SMART; SM00033; PH; 1.
SMART; SM000325; RhOGEF; 1.
SMART; SM000326; SH2; 1.
SMART; SM000326; SH3; 2.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 2.
PROSITE; PS00479; DAG PE BIND DOM 1;
PROSITE; PS50081; DAG PE_BIND_DOM_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q96D37
Q96D37;
                                                                                                                                                                                                                                                                                                                               PRINTS; PR00401; SH2DOMAIN PRINTS; PR00452; SH3DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein. Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            789 IGIAIARYDFCARDMRELSLLKGDVVKIYTKM----SANGWWRGEVNGR------VGWF 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23 ISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYF 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PSTYVEE 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PSNLVKE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   846 AA; 97815 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15.5%; Score 91.5; DB 13; 34.3%; Pred. No. 0.36; tive 12; Mismatches 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SH3 DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C47EE949D873821B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11;
```

Ş В

Gaps

```
RESULT 15
Q8UUX5
                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SQ DR DR DR
Transfer in the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8UUX5;
01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00741; DH_1; 1.

PROSITE; PS50010; DH_2; 1.

PROSITE; PS50001; PD0MAIN; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50001; SH3; 2.

Hypothetical protein; SH3 domain.

SEQUENCE 719 AA; 83727 MW; A51B757DA543BA6C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VAV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=11805146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8UUX5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kurosaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match 15.1%; Score 89.5; DB 4; Length 719; Local Similarity 32.9%; Pred. No. 0.49; es 23; Conservative 14; Mismatches 20; Indels 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           710 YVEED--YSE 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR------VGWFPAN 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ishiai M., Scharenberg A.M., Freshney N., Downward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        839 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20; Indels 13; Gaps
```

```
밁
                          á
                                                             В
                                                                                           Ś
                                                                                                                                                                                            SARBARAR
                                                                                                                                            Query Match
Best Local :
                                                                                                                              Matches
                                                                                                                                                                                                                          PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.
PROSITE; PS00741; DH 1; 1.
PROSITE; PS50010; DH 2; 1.
PROSITE; PS50003; PH_DOMAIN; 1.
PROSITE; PS500001; SH2; 1.
PROSITE; PS500002; SH3; 2.
                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                             SH3 domain.
823 GRVGWFPSTYVEEEGV 838
                                                             773 VFTPRVIGTAVARYNFAARDMRELSLREGDVVKIYSRIGGDQG---WWKG-----ETN 822
                               77 GIVGYFPSNLVKEQRV 92
                                                                                          20 VYT---ISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEM 76
                                                                                                                             23; Conservative
                                                                                                                        h 14.6%; Score 86.5; D Similarity 30.3%; Pred. No. 1.2; 23; Conservative 18; Mismatches
                                                                                                                                                                                          839 AA; 97500 MW; 6C1322ABAC23A530 CRC64;
                                                                                                                                                              DB 13; Length 839;
                                                                                                                              22; Indels 13;
                                                                                                                             Gaps
                                                                                                                                ω
--
```

Search completed: December 29, 2003, 16:06:26 Job time : 17.9468 secs

```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A Geneseq 19Jun03:*

| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1984.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1986.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1988.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1993.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1993.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1994.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1995.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
| SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         December 29, 2003, 16:03:18; Search time 21.5686 Seconds (without alignments) 809:506 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1107863 seqs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-26
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1107863
in
se
se
in
gul
```

		₩P			SUMMARIES	
Result No.	Score	Query Match	5		ID	Description
	591	100.0	110	22	AAB69127	Mouse MLP protei
N	591	100.0	128	22	AAB69125	Mouse MLP protei
ω	574	97.1	110	22	AAB69131	Rat MLP protein
4	574	97.1	128	22	AAB69130	Rat MLP protein
υ	547	92.6	110	22	AAB69126	Human MLP protei
თ	547	92.6	128	22	AAB82671	Human growth reg
7	547	92.6	128	22	AAB69123	Human MLP protei
œ	547	92.6	128	23	ABB95602	Human angiogenes
9	547	92.6	128	23	ABB84996	

4. U	44	43	42	41	40	9	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10
200	200	200		208.5	208.5	208.5	209.5	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	241.5	259.5	261.5	261.5	449	519	547	Α.
. ω	·		35.3	5	5	5	5	9		٠,	9	σ,	5	9	<u>ب</u>	6.	9	36.9	6	6	σ,	9	٥,	٥,	٥,	٥,	σ,	0	Ψ	.4	4.	76.0	7	Ñ	Ň
499	499	499	1907	410	410	125	138	714	714	303	303	303	303	303	303	303	303	303	303	303	303	303	303	303	303	303	125	130	137	131	131	87		128	N
24	24	22	23	23	21	23	22	23	21	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	22	22	23	16	22	22	16	22	22	23	23
ABU65864	14	AAU29319	212	ABB82118	AAY70210	ABB82120	AAM25834	ABB82117	AAY70209	ABU10790	ABU57211	ABU56216	ABU58680	ABU65544	ABU67686	ABU66182	ABU65849	ABU72191	ABU72034	ABU71588	ABU71392	ABB84994	ABB95600	ABG95933	AAB87608	AAU29304	ABB82119	AAR69812	AAG65615	U.	AAR69811	AAB69129	AAB82672	AAU09871	AAU83627
Human secreted/tra	Human PRO20088 pro	PRO polype	TANGO 130	TANGO 130	TANGO 130	TANGO 13	protein se	TANGO 130 p	O.	secr		secr	PRO	w		5	ຜ	n PRO po	5				angiogenes		70		GO 130				noma	Rat MLP protein se	Human growth regul	Novel human secret	Human PRO protein,

ALIGNMENTS

```
RESULT 1
WPI; 2001-159271/16.
N-PSDB; AAF59080.
                                                                                                                                                                                    MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor.
                                Tanaka H;
                                           Itoh Y,
                                                                                30-JUN-1999; 99JP-0186718.
                                                                                                     29-JUN-2000; 2000WO-JP04278.
                                                                                                                           11-JAN-2001.
                                                                                                                                              WO200102564-A1
                                                                                                                                                                  Mus musculus.
                                                                                                                                                                                                                                                                                AAB69127;
                                                                                                                                                                                                                                                                                                   AAB69127 standard; Protein; 110 AA
                                                                                                                                                                                                                                      Mouse MLP protein sequence SEQ ID NO:26,
                                                                                                                                                                                                                                                           23-APR-2001 (first entry)
                                                              (TAKE ) TAKEDA CHEM IND LTD.
                                         Nishi K,
                                         ogi ĸ,
                                         Ohkubo S,
                                        Mogi S,
                                        Noguchi Y,
                                        Yoshimura K;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 110; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                      encoded DNA,
                                                                                                                                  N-PSDB; AAF59068.
                                                                                                                                                                                                                                                                                                                                                                                                                    MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                    promoters and inhibitors for preventing
                                                                                                                                                WPI; 2001-159271/16.
                                                                                                                                                                               Tanaka H;
                                                                                                                                                                                                                                                       30-JUN-1999;
                                                                                                                                                                                                                                                                                     29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                 WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                             Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse MLP protein sequence SEQ ID NO:12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB69125 standard; Protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 3; Page 98-99; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                         (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                    low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>بــر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                            Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       110 AA;
                                                                                                                                                                                                                                                       99JP-0186718
                                                                                                                                                                                            ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                               Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 591; DB 22;
Pred. No. 2.7e-68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                            ຮ
                                                                                                                                                                                            Mogi S,
                                                                    or treating e.g. bone
                                                                                                                                                                                            Noguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 110;
                                                                                                                                                                                            Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                    joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Claim 4; Page 93-94; lllpp; Japanese

present

invention describes novel MLP proteins and

their encoding

Sequence

```
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ននននននន្តន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 110
                                          The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                 Claim 5; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                         N-PSDB; AAF59099.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and NNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus sp
                                                                                                                                                                                                                                                                                                                           ₩PI:
                                                                                                                                                                                                                                                                                                                                                       Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                         Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rat MLP protein sequence SEQ ID NO:49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB69131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                            in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                        (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB69131 standard; Protein; 110 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                       2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19
                                                                                                                                                                                                                                                                                                                                                                         Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                           99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                       Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                         Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 591; DB 22;
Pred. No. 3.3e-68;
D; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                       Mogi S,
                                                                                                                                                                                                                                                                                                                                                                       Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 128;
                                                                                                                                                                                                                                                                                                                                                                          Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                     joint
                                                                                                                                                                                                                                                                                                                                                                         ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

```
뮍
                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                            Matches 106;
                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 106; Conservative
                                                                                                                                                The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint disease as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                      Claim 6; Page 106; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAF59098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JUN-1999; 99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rat MLP protein sequence SEQ ID NO:47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB69130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB69130 standard; Protein; 128 AA.
                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                              2001-159271/16.
      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                               \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ш
                                                                            Similarity
HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 78
                 | HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLYTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                         128 AA;
                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97.1%;
                                                                          97.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ohkubo S,
                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Mismatches
                                                                          Score 574; DB 22;
Pred. No. 5.3e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 574; DB 22; Length 110; Pred. No. 4.3e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mogi S,
                                                                                        DB 22;
                                                            1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Noguchi Y,
                                                                                        Length 128;
                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.
                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
RESULT 5
AAB69126
    밁
                                                                 밁
                                Ş
                                                                                             Ş
                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                              Query Match
Best Local
                                                                                                                                 Matches
                                                                                                                                                                                                                                   The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the disgnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59033 to AAF59099 and AAF69122 to AAF69132 represent sequences used
                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                             Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 97-98; 111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAF59079.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human MLP protein sequence SEQ ID NO:24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB69126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB69126 standard; Protein; 110 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [toh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-159271/16.
    61
                 61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                 Н
                                                                                           1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                    exemplification of the present invention.
                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nishi K, Ogi K, Ohkubo S,
GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 110
                                                            HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                            110 AA;
                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99JP-0186718
                                                                                                                                           92.6%;
                                                                                                                          Score 547; DB 22;
Pred. No. 1.3e-62;
7; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mogi s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Noguchi Y, Yoshimura K;
                                                                                                                                                         Length 110;
                                                                                                                            Indels
                                                                                                                            0
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                  joint
                                                              60
                                                                                             60
```

RESULT 6

AAB82671

AAB82671 standard; Protein; 128

8

```
CC The present sequence is that of a novel human growth regulatory-like CC polypeptide (GRLP). The amino acid sequence is predicted from a CC novel assembled cDNA (see AAH26343) based on Hyseq clone number CC 16372272. The protein has a mollwt. of 14 kDa unglycosylated. GRLP belongs to the same protein family as growth regulatory proteins. CC growth factors, human melanoma derived growth regulatory protein CC precursor (64% similarity and 45% identity over 11 amino acids) CC or melanoma inhibitory activity, cattle cartilage-derived Cr etinoic acid sensitive protein (CD-RAP, 44% identity and 64% cartilarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention CC can be used in the prophylaxis, treatment (including gene therapy) CC and diagnosis of disorders and diseases caused by, or involving, CC artilage development and maintenance, inhibition of melanoma cell C glomas. The polypeptides, which include the GRLP mature protein, CC may also have nutritional uses, cytokine and cell proliferation or differentiation activity, istem cell growth factor activity, haematopoiesis regulating activity, tissue growth activity, and treatment of leukaemia, nervous system disorders, and therapy, CC drug screening, receptor/ligand activity, antiinflammatory cartivity, and inflammation of leukaemia, nervous system disorders, arthritics and inflammation
                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neuroectodermal tumour; glioma; cancer; therapy; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human growth regulatory-like polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 10; Page 116-117; 119pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAH26343.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-483233/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mize NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JAN-2000; 2000US-0491404.
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-JAN-2001; 2001WO-US02455.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                      arthritis and inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC
   99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Boyle BJ,
                                                                     128 AA;
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0491404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note= "separately claimed in Claim 10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label= Mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                92.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ford JE,
Score 547; DB 22; Length 128; Pred. No. 1.7e-62; 7; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tang YT,
   0
   0
```

유

61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110

GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
밁
                         Ş
                                                          Matches
                                                                                    Query Match
                                                                                                                                                       The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF5909 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB69123 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-159271/16.
N-PSDB; AAF59065.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-APR-2001
                                                                                                                                                                                                                                                                                                                  Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human MLP protein sequence SEQ ID NO:6
                                                                                                                Sequence
                                                                                                                                                                                                                                                                           Claim 2; Page 91-92; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                         Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-JAN-2001
                                                                                                                                             in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                        Itoh Y,
                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19
1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYYYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                     Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                128 AA;
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                     ogi K,
                                                                      92.6%; Score 547; DB 22; 90.0%; Pred. No. 1.7e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Ohkubo S, Mogi S,
                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                     Noguchi Y,
                                                                                  Length 128;
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshimura
                                                         <u>.</u>.
                                                          Gaps
                                                                                                                                                                                                                                                                                                                        joint
```

```
RESULT 8
ABB95602
                                                                                                                                         10-MAY-2001;
25-MAY-2001;
25-MAY-2001;
25-MAY-2001;
30-MAY-2001;
                                                                                                                                                                                    14-MAR-2001;
22-MAR-2001;
05-APR-2001;
10-MAY-2001;
                                                                                                                                                                                                                       01-DEC-2000;
20-DEC-2000;
20-DEC-2000;
20-DEC-2001;
22-JAN-2001;
28-FEB-2001;
28-FEB-2001;
01-MAR-2001;
09-MAR-2001;
                         (GERB/)
(GERR/)
(GODD/)
(GODO/)
(GURN/)
                                                                   (GETH )
(BAKE/)
(FERR/)
                                                                                                                         30-MAY-2001;
01-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                           24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABB95602 standard; Protein; 128
        (MARS/)
                                                                                                                                                                                                                                                                                                10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                 18-SEP-2000;
                                                                                                                                                                                                                                                                                                                                          18-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                  20-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-JUL-2001; 2001WO-US21735.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200208284-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human angiogenesis related protein PRO9873 SEQ ID NO:
      GODDARD A.
GODOWSKI P J.
GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                  GERRITSEN M E.
                                                                     FERRARA
                                                                                      GENENTECH INC.
4
                                                                                                      2001WO-US17800.
2001WO-US19692.
2001WO-US00000.
                                                                                                                                                   2001US-0866034.
2001WO-US17092.
                                                                                                                                                                                     2001US-0828366.
2001US-0854208.
                                                                                                                                                                                                                        2001WO-US06666.
2001US-0802706.
                                                                                                                                 2001WO-US17443.
                                                                                                                                                                    2001US-0866028
                                                                                                                                                                                                                 2001US-0808689
                                                                                                                                                                                                                                          2001US-0796498.
2001WO-US06520.
                                                                                                                                                                                                                                                                                    2000WO-US32678.
                                                                                                                                                                                                        2001US-0816744
                                                                                                                                                                                                                                                           2001US-0767609.
                                                                                                                                                                                                                                                                     2000WO-US34956.
                                                                                                                                                                                                                                                                              2000US-0747259.
                                                                                                                                                                                                                                                                                                       2000US-0709238.
2000WO-US30952.
                                                                                                                                                                                                                                                                                                                         2000US-0665350.
2000US-242922P.
                                                                                                                                                                                                                                                                                                                                          2000US-0664610.
                                                                                                                                                                                                                                                                                                                                                   2000US-230978P
                                                                                                                                                                                                                                                                                                                                                                      2000WO-US23328
                                                                                                                                                                                                                                                                                                                                                                             2000WO-US23522.
                                                                                                                                                                                                                                                                                                                                                                                               2000US-222695P
                                                                                                                                                                                                                                                                                                                                                                                                        2000WO-US20710.
                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-219556P
```

```
RESULT 9
ABB84996
ID ABB8
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                         Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophlebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (PAON/) PAONI N F.
(STEP/) STEPHAN J F.
(WATA/) WATANABE C K.
(WILLL/) WILLIAMS P M.
                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                Human PRO9873 protein sequence SEQ ID NO:360.
                                                                                                                                                                                                                                                                                                                                                                                                                                                ABB84996 standard; Protein; 128 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                   16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-171999/22.
N-PSDB; ABL95740.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baker KP, Ferrara N, Ger
Godowski PJ, Gurney AL,
Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Fig 360; 567pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (WOOD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                           healing; chromosome mapping; gene mapping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WOOD W I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGI FMDRLASKKLCADDECVYTI SLASAQEDYNAPDCRF INVKKGQQI YVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence is a PRO protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerber H, Gerritsen ME, Goddard
L, Hillan KJ, Marsters SA, Pan
CK, Williams PM, Wood WI, Ye W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 547; DB 23;
Pred. No. 1.7e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ָכו
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Paoni NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

23-JUN-2000; 20-JUL-2000; 25-JUL-2000;

; 2000US-213637P. ; 2000US-219556P. ; 2000US-220624P.

20-JUN-2001;

2001WO-US19692.

```
片
                           Ś
                                                                                                                                               ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to CC ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polynucleotides, CC activities, agonists and antagonists are useful for treating or diagnosing croteins, agonists and antagonists are useful for treating or diagnosing cc. e.g. cardiovascular, endothelial or angiogenic disorder in a mammal, CC e.g. cardio, atherosclerosis, hypertension, arterial restenosis, CC rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, CC rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, CC rheumatoid arthritis, angiogenesis (such as breast carcinoma and liver CC carcinoma) and wound healing. The PRO polynucleotides have applications CC in molecular biology, including use as hybridisation probes, and in CC chromosome and gene mapping. ABL88259 to ABL88267 represent primers and CC probes used in the exemplification of the present invention.
                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-DEC-2000; 2000WG-US32678.
20-DEC-2000; 2000WG-US34956.
22-DAN-2001; 2001US-0767609.
28-FEB-2001; 2001US-0796498.
28-FEB-2001; 2001WG-US3666.
01-MAR-2001; 2001US-0802706.
01-MAR-2001; 2001US-0802706.
09-MAR-2001; 2001US-080869.
22-MAR-2001; 2001US-080869.
22-MAR-2001; 2001US-080869.
22-MAR-2001; 2001US-080869.
22-MAR-2001; 2001US-08066034.
05-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001US-0870574.
30-MAY-2001; 2001US-0870574.
30-MAY-2001; 2001US-US17800.
                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-SEP-2000;
18-SEP-2000;
24-OCT-2000;
08-NOV-2000;
08-NOV-2000;
10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                               One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski PJ,
Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                    Claim 11; Fig 360; 565pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ABL88251.
                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002-090516/12.
 19
                               L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENENTECH INC.
                                                                            Similarity
               HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ferrara N, Get.
                                                                                                                         128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0709238.
2000WO-US30952.
2000WO-US30873.
2000WO-US3678.
2000US-0747259.
2000WO-US34956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-230978P.
2000US-0664610.
2000US-0665350.
2000US-242922P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-220664P.
2000WO-US20710.
2000US-222695P.
                                                              Conservative
                                                                         92.6%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerber H, Gerrit
L, Hillan KJ, Ma
CK, Williams PM,
                                                                            Score 547; DB 23;
Pred. No. 1.7e-62;
                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerritsen ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Marsters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rsters SA, Pan Wood WI, Ye W;
                                                                                           23; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard A;
                                                              Indels
                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Paoni NF;
                                                              Gaps
                                 60
                                                              0
```

```
ARUBICT 10
ARUB3627
ID AAUB3627
ID AAUB3627
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC AAUB3
AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Baker KP,
Grimaldi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU83627 standard; Protein; 128 AA.
                                                                                                                                                                                                                                                                                 One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human PRO protein, Seq ID No 72.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU83627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-JUL-2000;
28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2001; 2001WO-US21066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                               WPI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                             2002-172001/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         necrosis factor-alpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      secreted protein; PRO; tumour; lung cancer; colon cancer;
cancer; prostate tumour; rectal tumour; liver tumour;
                                                                                                                                                                                                                                                                                                                                                                                    ABK33571.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n,
                                                                                                                                                                                                                                                                   liver tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers L,
C, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000WO-US34956.
2001WO-US06520.
2001US-0854280.
2001WO-US17092.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-220666P.
2000US-220893P.
2000WO-US20710.
2000WO-US23522.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-220607P
2000US-220624P
2000US-220638P
2000US-220664P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US30873.
2000US-253646P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-219556P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US32678.
2000US-0747259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000WO-US23328.
2000US-000000P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-220605P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-220585P
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerritsen ME, Goddard A, Godowski Smith V, Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski PJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wood WI;
                                                                                                                                                                                                                                                                                                rectal
```

The invention relates to one hundred and twenty two nucleic acids encoding PRO polypeptides. The sequences of the 122 PRO polypeptides, encode human secreted proteins. The PRO nucleic acids, polypeptides, agonists and antagonists are useful for treating a PRO related disorder. The PRO polypeptides are useful for diagnosing tumours, especially lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour. The PRO polypeptides are useful for stimulating the proliferation of, or gene expression, in pericyte cells, for stimulating

pericyte cells, for stimulating

Claim 11; Figure 72; 359pp; English.

```
RESULT 11
AAU09871
ID AAU09
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSSSSSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the proliferation or differentiation of chondrocyte cells, for stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal fibroblast cells. The PRO polypeptide may also be used as molecular weight markers and for tissue typing. The PRO nucleic acids have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. AAU83793-AAU83793 represent human PRO protein sequences of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertillty; neurological disease; psychiatric disease; cardiovascular disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                  Agarwal P,
                                                                                                                                                                                                                                                              (SMIK )
                                                                                                                                                                                                                                                                                                                                               11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                                                                                                                                                                                           25-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU09871 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          respiratory disease; renal; gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99;
                                                                                                                                                                                                                                                               SMITHKLINE SMITHKLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GEFWAGSVYGDHODEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 128 AA;
                                                                                                                                                                                                                                    Murdoch PR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                      2000US-196603P
2000US-199417P
                                                                                                                                                                                                                                                              BEECHAM CORP. BEECHAM PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein; 128 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92.6%;
                                                                                                                                                                                                                                  Rizvi SK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 547; DB 23; Pred. No. 1.7e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                    Smith RF,
                                                                                                                                                                                                                                 Xiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

78

0

The invention relates to an isolated novel secreted polypeptide (I) and polynucleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, neurological and psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, or gastrointestinal diseases. These may also be used to

The present sequence is that of a novel human growth regulatory-like polypeptide (GRLP) mature protein. The sequence is predicted from a novel assembled cDNA (see AAH2634) based on Hyseq clone number 1637272. The protein has a mol.wt. of 14 kDa unglycosylated. GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64%

abnormalities

and disorders

caused

ý

abnormal

autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer

New secreted proteins or polypeptides, useful for treating e.g. cancer,

AAS17583

Claim 1; Page 73-74; 92pp; English.

```
RESULT 12
AAB82672
ID AAB82672
XX AAB82672
XX AAB82
XX AAB82
XX AAB82
XX Growt
XX Growt
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                        Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, and nervous system hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polymucleotides may be used as diagnostic reagents, in chromosome localisation studies, and in tissue expression studies. The present sequence represents the
                                                                                                                                                                                                                                                                                                    Claim 10; Page 117; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAH26343.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human growth regulatory-like polypeptide (mature protein).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mize NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neuroectodermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB82672 standard; Protein; 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression, production, function and/or metabolism of the genes, as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    낁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HGI FMDRLASKKLCADDECVYTI SLASAQEDYNAPDCR FINVKKGQQI YVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tumour; glioma; cancer; therapy; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 547; DB 23;
Pred. No. 1.7e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     growth and tumours, including neuroectodermal tumours such as gliomas. The polypeptides, which include the GRLP mature protein, may also have nutritional uses, cytokine and cell proliferation or differentiation activity, stem cell growth factor activity, haematopoiesis regulating activity, tissue growth activity, immunosuppressive or immunostimulant activity, activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, use in cancer diagnosis and therapy, drug screening, receptor/ligand activity, antiinflammatory activity, and treatment of leukaemia, nervous system disorders, arthritis and inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteins. GRLP polypeptides and polymentorized the prophylaxis, treatment (including gene therapy) can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell cartilage development and maintenance, inhibition of melanoma cell
                                                                                                  Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                Example 9; Page 103; llipp; Japanese
                                                                                                                                                                            WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                           11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB69129 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention
                                                                                                                                                                                                                                Itoh Y,
                                                                                                                                                                                                                                                                                                     30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                      29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                               WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rat MLP protein sequence SEQ ID NO:39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 DKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DRIASKKICADDECVYTISIASAQEDYNAPDCRFINVKKGQQIYVYSKIVKENGAGEFWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                       99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA;
                                                                                                                                                                                                                              Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87.8%;
90.5%;
                                                                                                                                                                                                                                  Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 519; DB 22; Pred. No. 5.3e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                              S, Mogi S,
                                                                                                    or treating e.g. bone and
                                                                                                                                                                                                                                Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                    joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant

```
RESULT 14
AAR69811
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  នន្តន្តន្តន្តន្ត
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. ARF5963 to ARF5909 and ARB69122 to ARB69132 represent sequences used
      This protein has melanoma-inhibiting activity and can be used to treat cancer (melanoma, glioblastoma, neuroblastoma, small cell lung cancer, neurosctodermal tumours) or as an immunosuppressant (it inhibits IL-2 or phycohaemagglutinin induced proliferation of peripheral blood lymphocytes). Antibodies raised against the protein can be used to detect cell producing the protein and also for protein purification. Probes derived from DNA encoding the protein (AAQ84051), AAQ84051) can be used to detect sequences encoding the protein (CAQ84050, AAQ84051) can be used to detect sequences a fusion protein (conjugated with dihydrofolate reductase (DHFR)). (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                          New melanoma inhibiting protein and related nucleic acid - vectors, transformed cells, antibodies etc., useful for tr
                                                                                                                                                                                                                                                                                                            N-PSDB; AAQ84050, AAQ84051.
                                                                                                                                                                                                                                                                                                                             WPI; 1995-075191/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Melanoma; inhibition; cancer; melanoma; glioblastoma; neuroblastoma; small cell lung cancer; neuroectodermal tumours; immunosuppressant; phytchaemagglutinin; lymphocyte; interleukin 2; IL-2; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Melanoma inhibiting protein (human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
26-OCT-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR69811;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in the exemplification of the present invention
                                                                                                                                                                                                           Claim 1; Page 54; 85pp; German.
                                                                                                                                                                                                                                                                                                                                                            Bogdahn U,
                                                                                                                                                                                                                                                                                                                                                                                            (BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUL-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-FEB-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9503328-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR69811 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84.
                                                                                                                                                                                                                                           and as immunosuppressant e.g. by gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSVYGDHQDEMGIVGYFPSNLVKEQRV 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSVYGDHQDEMGIVGYFPSNLVREQRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                             93DE-4324247.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             94WO-EP02369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 76.0%;
96.6%;
                                                                                                                                                                                                                                                                                                                                                               Kaluza B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 131 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 449; DB 22;
Pred. No. 4.8e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                              for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT 15
AAG65614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS
CC antigen, for manufacturing a preparation against inflammatory diseases of tolerance in patients suffering from or susceptible to inflammatory considerance in patients suffering from or susceptible to inflammatory considerance in patients suffering from or susceptible to inflammatory considerance of MIA is useful as a therapeutic substance and is useful for manufacture of pharmaceutical preparations against confidence of inflammatory disease, such as an immune-cell mediated cartillage confidence of disease, specifically rheumatoid arthritis, autoimmune confidence of disease, internation arthritis, symmary confidence, myasthenia gravis, Addison's disease, primary biliary sclerosis, convertis, systemic lupus erythematosis, inflammatory bowel disease, confidence immune system intact as compared to the non-specific suppressive effect on the autoreactive T-cells thus leaving the other components of the immune system intact as compared to the non-specific suppressive effect on the autoreactive T-cells thus leaving the other components of the immune system intact as compared to the non-specific suppressive continuous professive difference of immunosuppressive drugs. The present sequence represents a formation of immunosuppressive drugs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIA; melanoma inhibiting activity protein; antiinflammatory; human; antiarthritic; antirheumatic; antithyroid; osteopathic; nephrotropic; immunosuppressive; ophthalmological; dermatological; antidiabetic; neuroprotective; immune tolerance; T-cell tolerance.
                                                                                                                                                                                                                                                                                                                                             The invention relates to the use of melanoma inhibiting activity (MIA) protein and/or its fragments that have anti-inflammatory effects and induce systemic immune tolerance or specific T-cell tolerance to MIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Use of melanoma inhibiting activity protein or its derivatives as immune modulatory agents for the treatment of inflammatory diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAG65614 standard; Protein; 131 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 4; Page 34; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAH47783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-611446/70.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-MAR-2000; 2000EP-0201063.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-MAR-2001; 2001WO-EP02991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200170253-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human MIA protein sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG65614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         specifically rheumatoid arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nelissen RLH, Verheijden GFM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-SEP-2001.
                 human MIA protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 WAGSVYGDHQDEMGI-VGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGE-F 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WGGSVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        131 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 261.5; DB 16; Length 131; Pred. No. 1.6e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
밁
                            S
                                                              밁
                                                                                             Ś
                                                                                                                                 Matches
                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                Sequence
                                                                                                                                                  Local Similarity
84 WGGŚVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131
                                                                27 MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF
                                64 WAGSVYGDHQDEMGI-VGYFPSNLVKEORVYQEATKEIPTIDIDFFCE 110
                                                                                             5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGE-F 63
                                                                                                                                 49;
                                                                                                                                                                                                   131 AA;
                                                                                                                                  Conservative
                                                                                                                                                44.2%; Score 261.5; DB 22; 45.4%; Pred. No. 1.6e-25;
                                                                                                                                  24; Mismatches
                                                                                                                                      30;
                                                                                                                                      Indels
                                                                                                                                                                    Length 131;
                                                                                                                                      5
                                                                                                                                      Gaps
                                                                       83
```

Search completed: December 29, 2003, 16:09:03 Job time : 21.5686 secs

```
Scoring table: BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
Published Applications AA:*

1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*

5: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*

11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*

12: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*

13: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*

14: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*

16: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

16: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

17: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

18: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

19: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       724715 segs, 199017464 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               December 29, 2003, 16:09:08; Search time 15:098 Seconds (without alignments) 1449.984 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             591
1 HGVFMDKLSSKKLCADEECV.....RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
```

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result Query No. Score Match	92	92	92	547 92	547 92	547 92	547 92	547 92	547 92	547 92	547 92	547 92		92	13 547 92.6 14 547 92.6
Length	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
DB	12	12	12	12	12	12	12	12	12	12	ր 2	12	12	12	12
ID	US-10-216-163-72	US-10-218-765-72	US-10-219-063-72	US-10-219-066-72	US-10-219-067-72	US-10-219-068-72	US-10-219-069-72	US-10-219-073-72	US-10-219-475-72	US-10-219-480-72	US-10-219-483-72	US-10-219-525-72	US-10-219-526-72	US-10-219-530-72	US-10-219-531-72
Description	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,	Sequence 72,
	App1	App1	Appl	App1	Appl	Appl	Appl	Appi	App1						

4 4.	44	43	42	41	40	39	38	. 37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547
92.6	N	N	N	'n	N	Ν	N	2	'n	٥.	ν.	'n	N	N	٢	٣	Ö	Ņ	·	Ņ	'n	.~	'n	.~		۲.	.~	.~	.~
128																													
15	15	15	15	15	15	15	15	15	15	5	15	15	15	_U	v	U	15	15	15	15	15	5	15	N	~	N	2		~
0-219-478-7	-10-219-468-7	-10-218-956-7	-10-216-165-7	-10-232-233-7	-10-232-231-7	-10-230-260-7	-10-219-481-7	-10-219-4	0-219-466-7	0-219-464-	0-219-075-7	19-003-7	0-230-434-	-10-219-076-7	-10-227-883	-10-227-873-7	-10-218-849-7	16-159A-	-10-230-414-72	18-631-7	-10-230-338-7	-10-230-163-7	0-227-884-7	23-082-3	-10-232-228-72	30-437-7	-10-223-081-3	-219-533-72	-10-219-5
e 72,	•	equence 72,	equence 72,	equence 72,	equence 72,	equence 72,	e 72,	equence 72,	equence 72,	e 72,	e 72,	e 72,	quence 72,	quence /2,	e 72,	e 72,	quence 72,	e 72,	equence 72,	equence /2,	equence 72,	equence 72,	e //,	equence sou,	equence /2,	e 72,	equence 350,	e 72,	equenc

ALIGNMENTS

			US:
FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION	APPLICA FILING FILING FILING FILING APPLICA FILING FILING APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA	APPLICANT: Gurney, Austin L. APPLICANT: Smith, Victoria APPLICANT: Stephan, Jean-Philippe F. APPLICANT: Stephan, Jean-Philippe F. APPLICANT: Watanabe, Colin L. APPLICANT: Wood, William I. TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C3 CURRENT APPLICATION NUMBER: US/10/216,163 CURRENT FILING DATE: 2002-08-09 PRIOR APPLICATION NUMBER: 10/119,480 PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09	US-10-216-163-72 US-10-216-163-72 ; Sequence 72, Application US/10216163 ; Publication No. US20030149239A1 ; GENERAL INFORMATION: ; APPLICANT: Baker, Kevin P. ; APPLICANT: Desmoyers, Luc ; APPLICANT: Gerritsen, Mary ; APPLICANT: Goddard, Audrey ; APPLICANT: Godowski, Paul J. ; APPLICANT: Grimaldi, J. Christopher
		()	

1998-06-17 1998-05-22

```
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 72
LENGTH: 128
TYPE: PRT
ORGANISM: Homo Sapien
US-10-216-163-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-218-765-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 72, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Baker,
APPLICANT: Desnoy
APPLICANT: Gerrit
APPLICANT: Goddar
APPLICANT: Godows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: 93530P1C19
CURRENT APPLICATION NUMBER: US/10/218,765
CURRENT FILING DATE: 2002-08-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                              PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                           PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/062287 FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1997-10-17
APPLICATION NUMBER: 60/663549
FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/664103
FILING DATE: 1997-10-31
                                 FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/082804
FILING DATE: 1998-04-22
                                                                                        APPLICATION NUMBER: 60/081955
                                                                                                                                                                    APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/069873
APPLICATION FILING DATE:
                                                                                                           FILING DATE: 1998-04-15
                                                                                                                               APPLICATION NUMBER: 60/081819
                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                 FILING DATE:
                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 HGVEMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/10218765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kevin P
                 NUMBER: 60/084441
                                                                                                                                                                                                                             1998-03-25
                                                                                                                                                     1998-03-
                                                                                                                                                                                          1998-03-
                                                                                                                                                                                                                                                                   1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92.6%;
90.0%;
                                                                                                                                                                                                          60/079656
                                                                                                                                                                                                                                               60/079294
                                                                                                                                                                                                                                                                                      60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 547; DB 12;
pred. No. 2.2e-59;
7; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/089538 PRIOR FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/086392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/089905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DR APPLICATION NUMBER: 60/099803
DR FILING DATE: 1998-09-10
DR APPLICATION NUMBER: 60/099811
DR FILING DATE: 1998-09-10
DR APPLICATION NUMBER: 60/099812
DR FILING DATE: 1998-09-10
DR FILING DATE: 1998-09-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/085323
FILING DATE: 1998-05-13
APPLICATION NUMBER: 60/085579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090691
FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090695
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-08-04
APPLICATION NUMBER: 60/095318
FILING DATE: 1998-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/095302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/096791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/096146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/
FILING DATE: 1998-09-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-08-31
APPLICATION NUMBER: 60/099596
FILING DATE: 1998-09-09
APPLICATION NUMBER: 60/099598
FILING DATE: 1998-09-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-08
APPLICATION NUMBER:
FILING DATE: 1998-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/095916
                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-09-11
APPLICATION NUMBER: 60/100385
FILING DATE: 1998-09-15
APPLICATION NUMBER: 60/100390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/098544
                                                                                                                                       APPLICATION NUMBER: 60/101741 FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/100627
                                                            FILING DATE: 1998-09-25
APPLICATION NUMBER: 60/101916
FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/100919
                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/100848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
         FILING DATE: 1998-09-24
APPLICATION NUMBER: 60/
                                                                                                                     APPLICATION NUMBER: 60/101786
                                                                                                                                                                                FILING DATE: 1998-09-24
                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/101477
                                                                                                                                                                                                                                                           FILING DATE: 1998-09-17
                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                             APPLICATION NUMBER: 60/101922
```

1998-08-26

1998-08-17

60/097986

1998-09-16

60/100038

60/099816

1998-09-23

60/101738

```
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1998-11-17
PRIOR APPLICATION NUMBER: 60/108801
PRIOR FILING DATE: 1998-11-17
PRIOR APPLICATION NUMBER: 60/108849
PRIOR FILING DATE: 1998-11-18
PRIOR APPLICATION NUMBER: 60/112422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1998-11-03
PRIOR APPLICATION NUMBER: 60/108787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/106248
PRIOR FILING DATE: 1998-10-29
PRIOR APPLICATION NUMBER: 60/106464
PRIOR FILING DATE: 1998-10-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/106905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OR APPLICATION NUMBER: 60/123618
OR FILING DATE: 1999-03-10
OR APPLICATION NUMBER: 60/125259
OR FILING DATE: 1999-03-19
OR APPLICATION NUMBER: 60/125775
OR FILING DATE: 1999-03-23
OR APPLICATION NUMBER: 60/126773
OR FILING DATE: 1999-03-29
OR APPLICATION NUMBER: 60/127887
OR FILING DATE: 1999-04-05
OR APPLICATION NUMBER: 60/130232
APPLICATION NUMBER: 60/151733
FILING DATE: 1999-08-31
APPLICATION NUMBER: 60/164418
FILING DATE: 1999-11-09
                                                                                                        APPLICATION NUMBER: 60/149320
FILING DATE: 1999-08-17
APPLICATION NUMBER: 60/149638
FILING DATE: 1999-08-17
                                                                                                                                                                                                        APPLICATION NUMBER: 60/146222
FILING DATE: 1999-07-28
APPLICATION NUMBER: 60/146963
FILING DATE: 1999-08-03
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/141037
FILING DATE: 1999-06-23
APPLICATION NUMBER: 60/144758
FILING DATE: 1999-07-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1999-04-27
APPLICATION NUMBER: 60/131445
FILING DATE: 1999-04-28
APPLICATION NUMBER: 60/134287
FILING DATE: 1999-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1999-01-12
APPLICATION NUMBER: 60/115565
FILING DATE: 1999-01-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-12-22
APPLICATION NUMBER: 60/113605
FILING DATE: 1998-12-23
APPLICATION NUMBER: 60/113621
                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/145698 FILING DATE: 1999-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1999-06-22
APPLICATION NUMBER: 60/140723
FILING DATE: 1999-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILLING DATE: 1999-04-21
APPLICATION NUMBER: 60/131022
FILING DATE: 1999-04-26
APPLICATION NUMBER: 60/131270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/113296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/140650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1999-04-27
APPLICATION NUMBER: 60/131291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/119549 FILING DATE: 1999-02-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/115733
FILING DATE: 1999-01-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/115558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DATE: 1998-10-28
```

```
; ORGANISM: Homo Sapien US-10-219-063-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
US-10-219-063-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
Query Match
Best Local Similarity 90.0
                                                                                                                                                                                SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 72, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C24
FILE REFERENCE: P3530P1C24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                      LENGTH: 12
TYPE: PRT
                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION UNMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/166361
PRIOR FILING DATE: 1999-11-16
PRIOR APPLICATION NUMBER: 60/169445
PRIOR FILING DATE: 1999-12-07
PRIOR APPLICATION NUMBER: 60/169495
PRIOR FILING DATE: 1999-12-07
                                                                                                                                                                                                                                     PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/219,063
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker,
                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                             128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HGVFMDXLSSKKLCADEBCVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10219063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           t; Score 547; DB 12;
t; Pred. No. 2.2e-59;
7; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

92.6%; Score 547; DB 12; 90.0%; Pred. No. 2.2e-59; ative 7; Mismatches 4;

Length 128;

Indels

0

0

US-10-219-067-72

```
밁
                                                                                                                              S
                                                                                                                                                                                      В
RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Homo Sapien
US-10-219-066-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-066-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, RAPPLICANT: Desnoye APPLICANT: Gerrits APPLICANT: Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 72, Application US/102 Publication No. US20030187203A1
                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Remaining Prior Application data removed - See File Wrapper or PALM NIMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/062287 PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: P3530P1C27
CURRENT APPLICATION NUMBER: US/10/219,066
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
                                                                                                                                                                                19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                           79 GEFWÄGSVYGDGODEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                              61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
                                                                                                                                                                                                                                                                                                99;
                                                                                                                                                                                                                                     1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                          h 92.6%; Score 547; DB 12; Length 128;
Similarity 90.0%; Pred. No. 2.2e-59;
99; Conservative 7; Mismatches 4; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/10219066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kevin P.
                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      78
```

```
₽
                                            ঠ
                                                                                            밁
                                                                                                                                                                                                                                                                           ; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-067-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 72, Application US/10219067 Publication No. US20030187204A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 72
                                                                                                                                                                                      Matches
                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                          Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: P3530P1C51
CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                           LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                     61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                       19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                 1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                      99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Austin L.
                                                                                                                                                                                                    90.0%;
                                                                                                                                                                          7; Mismatches
                                                                                                                                                                                                    Score 547; DB 12;
Pred. No. 2.2e-59;
                                                                                                                                                                                 4:
                                                                                                                                                                                                                           Length 128;
                                                                                                                                                                                 Indels
                                                                                                                                                                               o
;
                                                                                                                                                                               Gaps
                                                                                            78
                                                                                                                                                                                 0,
```

US-10-219-068-72 ; Sequence 72, Application US/10219068 ; Publication No. US20030187205A1

GENERAL INFORMATION

APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc

APPLICANT:

Desnoyers, Luc Gerritsen, Mary Goddard, Audrey

APPLICANT:

Godowski, Paul J. Grimaldi, J. Christopher Gurney, Austin L.

APPLICANT:

```
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul J.
APPLICANT: Gorimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Smith, Victoria
APPLICANT: Wetanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C40
CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-219-069-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-219-068-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 72, Application US/10219069
Publication No. US20030187206A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/219,068
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Remaining Prior Application NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/069873 PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC DE INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker,
APPLICANT: Desno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: P3530P1C31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEAIKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GEFWAGSVYGDGODEMGVVGYFPRNLVKEORVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application data removed - See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                           Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 547; DB 12; Length 128; Pred. No. 2.2e-59; 7; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
US-10-219-073-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo Sapien US-10-219-069-72
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 72, Application US/10219073 Publication No. US20030187207A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C52
CURRENT APPLICATION NUMBER: U8/10/219,073
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1097-09-17
PRIOR FILING DATE: 11997-09-17
PRIOR FILING DATE: 11997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/059113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/069873
FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLYTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92.6%;
Similarity 90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GEFWAGSVYGDGQDEMGVVGYFPRNLVKEORVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                             Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Grimaldi, J. Christopher Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 547; DB 12; Length 128; Pred. No. 2.2e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
; TYPE: PRT; ORGANISM: Homo Sapien US-10-219-073-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-219-475-72
                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/219,475
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR PRIOR PRICING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069073
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069073
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069073
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069073
PRIOR FILING DATE: 1997-10-31
                                                                                                                            PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR PRIOR PRION NUMBER: 60/079728
PRIOR PRIOR DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, K
APPLICANT: Desnoye
APPLICANT: Gerrits
APPLICANT: Goddard
APPLICANT: Goddowsk
APPLICANT: Godowsk
APPLICANT: Grimald
APPLICANT: Gurney,
APPLICANT: Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 72, Application US/10219475
Publication No. US20030187208A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                 Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                              PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: P3530P1C49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
Q ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 547; DB 12; Length 128; Pred. No. 2.2e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C38
CURRENT APPLICATION NUMBER: US/10/219,480
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/05287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063873
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo Sapien US-10-219-475-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                          US-10-219-480-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-219-480-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
                                                                                                                                                                                                                                           SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION
                                                                                        Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 72, Appublication No.
                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, APPLICANT: Desnoy
                                                                                                                                                                                                                                                                Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                       ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                       ENGTH: 128
                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99:
                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219480
                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US20030187209A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92.6%;
90.0%;
                                                                                   92.6%; Score 547; DB 12; 90.0%; Pred. No. 2.2e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 547; DB 12;
Pred. No. 2.2e-59;
                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 12; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Indels
                                                                                                          Length 128;
                                                                 Indels
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

당

19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYYYSKLVKENGA

78

```
RESULT 12
US-10-219-525-72
                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-483-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-483-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR PEPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
                     Sequence 72, Application US/10219525
Publication No. US20030187211A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 72, Application US/102 Publication No. US20030187210A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/064103
PRIOR TILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/219,483
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                            Match 92.6%;
Local Similarity 90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79
                                                                                                                                                                                 61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                              19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                         99;
                                                                                                                                                                                                                                                                                        1 HGVFMDKLSSKKLCADEBCVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                       GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/10219483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F
                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                         7; Mismatches
                                                                                                                                                                                                                                                                                                                                     Score 547; DB 12; Length 128; Pred. No. 2.2e-59; 7; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                       0
```

Sequence 72, Application US/102 Publication No. US20030187212A1 GENERAL INFORMATION:

Application US/10219526

APPLICANT: Baker, Kevin P.

APPLICANT: APPLICANT:

APPLICANT:

Gurney, Austin L. Smith, Victoria

Godowski, Paul J. Grimaldi, J. Christopher

PPLICANT:

APPLICANT:

Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.

APPLICANT: APPLICANT:

Desnoyers, Luc Gerritsen, Mary

Goddard, Audrey

APPLICANT:

```
밁
RESULT 13
US-10-219-526-72
                                                                                            日
                                                                                                                                                                                                                                                                                                                                                                    US-10-219-525-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 72
                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/062287 PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/059113 PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/064103 PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/063549 PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 128
                                                                                                                                                                                                                                                                                               Local
                                                                                          79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                   61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                    19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                            99;
                                                                                                                                                                                                           1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKXGQQIYYYSKLVTENGA 60
                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F.
Watanabe, Colin L.
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                               92.6%;
                                                                                                                                                                                                                                                                     Score 547; DB 12; Length 128; Pred. No. 2.2e-59; 7; Mismatches 4; Indels
                                                                                                                                                                                                                                                                          ..
                                                                                                                                                                                                                                                                            Gaps
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LENGTH: 128
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-526-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-219-530-72
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, I
APPLICANT: Desnoys
APPLICANT: Gerritte
APPLICANT: Goddard
APPLICANT: Goddowsl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 72, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
PRIOR APPLICATION NUMBER: 10/119, 480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                       FILE REFERENCE: P3530P1C54
CURRENT APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Remaining Prior Application data removed - See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/062287 PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                     PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC ITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE: P3530P1C41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            b 92.6%;
Similarity 90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                            Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10219530
No. US20030187213A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 547; DB 12; Length 128; Pred. No. 2.2e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
US-10-219-531-72
Sequence 72, Application US/102; Publication No. US20030187214A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-530-72
                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/219,531
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/05287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION UNMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
                                                                                             PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION UNMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/063549
PRIOR TILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/079656 FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 547; DB 12;
Pred. No. 2.2e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

APPLICATION NUMBER: 60/079294 FILING DATE: 1998-03-25 APPLICATION NUMBER: 60/079656

```
; PRIOR FILING DATE: 1998-03-26
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR FILING DATE: 1998-03-27
; Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
; SEQ ID NO 72
; LENGTH: 128
   TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-531-72

QUETY Match
Best Local Similarity 90.0%; Pred. No. 2.2e-59;
Matches 99; Conservative 7; Mismatches 4; Indels 0; Gaps 0;
Matches 99; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0; Gaps 0;

Matches 99; Conservative 7; Mismatches 1; Indels 0;

Matches 12; Indels 12; Indels 12; Indels 12; Indels
```

Scoring table: Sequence: Perfect score: Title: Run on:

Sequence 137, App Sequence 217, App Sequence 198, App Sequence 18644, Ap Sequence 30596, A Sequence 139, App Sequence 457, App

Sequence Sequence Sequence Sequence Sequence Sequence

8, Appli
8, Appli
8, Appli
8, Appli
2, Appli
2, Appli
2, Appli
2, Appli
2, Appli
6, Appli
6, Appli

Sequence Sequence

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-26
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December 29, 2003, 16:03:18 ; Search time 8.0112 Seconds (without alignments) 580.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            328717 seqs, 42310858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14.0
13.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40.
15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                          1589
694
694
695
695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapext 0.5
    US-08-578-649-2
US-08-578-649-2
US-07-646-5378-2
US-07-346-510B-21
US-09-346-510B-21
US-09-346-510B-21
US-09-346-510B-24
US-08-164-839-6
US-08-630-915A-194
US-08-630-915A-31
US-08-630-915A-31
US-08-630-915A-31
US-08-630-915A-31
US-08-630-915A-31
US-08-630-915A-31
US-08-630-915A-31
US-08-630-915A-31
US-08-630-915A-31
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 194, Appl
Sequence 194, Appl
Sequence 31, Appl
Sequence 31, Appl
Sequence 33, Appl
Sequence 70, Appl
Sequence 70, Appl
Sequence 70, Appl
Sequence 70, Appl
Sequence 70, Appl
Sequence 71, Appl
Sequence 72, Appl
Sequence 72, Appl
Sequence 73, Appl
Sequence 70, Appl
Sequence 70, Appl
Sequence 71, Appl
Sequence 72, Appl
Sequence 136, Appl
Sequence 125, Appl
Sequence 125, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
Sequence 210, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 2, Application US/08578649 ; Patent No. 5770366
                                                                                                                                           ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-578-649-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-578-649-2
                                                                  Matches
                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2

FILING DATE: 20-July-1993

ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                       TELEPHONE: (212) 688-920
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: WOrdperfect
CURRENT APPLICATION DATA:
APPLICATION UNDEER: US/08/578,649
FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 805 Th
                                                                                                                                                                                                        TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                        LENGTH:
                                                                49; Conservative
    5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGE-F 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10022
                                                                                     Similarity
                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New York
                                                                                                                                                                                                                        131 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Felfe & Lynch
                                                              44.2%; Score 261.5; DB 1;
45.4%; Pred. No. 2.4e-26;
ative 24; Mismatches 30;
                                                                                                                                                                                                                                                                                                          688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-630-915A-137

US-08-630-915A-217

US-08-630-915A-198

US-09-252-991A-18644

US-09-252-991A-30596

US-09-252-991A-30596

US-09-252-991A-37

US-09-198-452A-457

US-09-198-452A-457

US-08-459-967-8

US-08-459-967-8

US-08-459-871-8

US-09-104-523A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2

US-09-104-623A-2
```

ö

Score

Length 131; Indels

ъ ••

Gaps

```
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-578-649-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
                                                                                                                                RESULT 3
US-07-646-537B-2
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-578-649-5
          Secuence 2, Application US/07646537B
Patent No. 5348864
GENERAL INFORMATION:
APPLICANT: Barbacid, Mariano
TITLE OF INVENTION: Vav Proto-Oncogene Protein
NUMBER OF SEQUENCES: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-ULLY-1994
CLASSIFICATION: 435
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-ULLY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
TRANCEY AUGUST 11 TOPER 1276
TOTALEY TRANCES 21 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigittle Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DC
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 2: CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                        y Match 40.9%; Score 241.5; DB 1; Length 130;
Local Similarity 45.4%; Pred. No. 9.6e-24;
hes 49; Conservative 21; Mismatches 33; Indels 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 WAGSVYGDHQDEMGI-VGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27 MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF 83
                                                                                                                                                                                                                   83 WGGSVQGGYYGDLAARLGYFPSSIVREDLNSKPGKIDMKTDQWDFYCQ 130
                                                                                                                                                                                                                                                      64 WAGSVYGDHQDEMGI-VGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                               26 MPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF 82
                                                                                                                                                                                                                                                                                                                                     5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGE-F 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: 3.5 inch 1.44 Mb storage diskette
IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                              <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                u
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-07-646-537B-2
밁
                                                                                                                                                                                                                                                                                                   SEQ ID NO 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                   Query Match
μ
```

```
US-09-346-510B-21
                                                                                                                                                                             US-09-346-510B-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 21, Application US/09346510B Patent No. 6281014
                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (609) 921-4526
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: D6221CIP
CURRENT APPLICATION NUMBER: US/09/346,510B
CURRENT FILING DATE: 1999-07-01
PRIOR APPLICATION NUMBER: 08/871,732
PRIOR FILING DATE: 1997-06-09
NUMBER OF SEQ ID NOS: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
CLASSIFICATION: 435
ATTORNEY AGENT INFORMATION:
NAME: Gaul, Timothy J.
REGISTRATION NUMBER: 33,11
REFERENCE/DOCKET NUMBER: D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: O'Brien, Timothy J.

APPLICANT: Wang, Yinxiang
TITLE OF INVENTION: SH3-Containing Protein, DNA and Uses Thereof
                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: unknown
FEATURE:
                                                                                                                                                                                    NAME/KEY: Domain
OTHER INFORMATION: amino acid sequence of Vav SH3 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: (609) 921-5901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                       ENGTH: 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: ami
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Bris
STREET: P.O. Bo
CITY: Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 08543-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/07/646,537B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 15.5%; Score 91.5; DB 1; Length 844; Local Similarity 32.9%; Pred. No. 0.0053; Les 23; Conservative 14; Mismatches 20; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      835 YVEED--YSE 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            786 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86 LVKEQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26 ARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSN 85
                                          28 AQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                          20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New Jersey
ARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----VGWFPANYV 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          844 amino acids
                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bristol-Myers Squibb Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Box 4000
                                                                                                            14.0%; Score 82.5; DB 3; Length 54; 32.3%; Pred. No. 0.0016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33,111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2:
                                                                                          13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  010
                                                                                          18;
                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13;
                                                                                          11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        رب
--
```

88 KE

89

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-356-952-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-164-839-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-356-952-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/09356952
Patent No. 6117663
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 4
LENGTH: 1589
TYPE: PRT
ORGANISM: Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/08164839 Patent No. 5514573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Boriack-Sjodin, Ann
APPLICANT: Margarit, S. M.
APPLICANT: Margarit, S. M.
APPLICANT: Bor-Sogi, Dafna
APPLICANT: Cole, Philip
APPLICANT: Kuriyan, John
TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF USE
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 600-1-228N
CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT APPLICATION NUMBER: US/09/356,952
EARLIER APPLICATION NUMBER: 60/093,631
BARLIER FILING DATE: 1998-07-21
BARLIER FILING DATE: 1998-07-21
BUNDBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
               COMPUTER READABLE FORM:
MEDLIM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/164,839
                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                         ADDRESSEE: ADDRESSEE:
                                                                                                                                                                                                           STATE:
                                                                                                                                                                                                                                 CITY: Arlington
                                                                                                                                                                                                                                                     STREET:
FILING DATE:
                                                                                                                                                                      ZIP:
                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 WWDGLVIDDSNGKVN-RGWFPQNFGRPLR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50 EE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63 FWAGSVYGDHODEMGIVGYFPSNLVKEQR 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    45 LSSSPSTSELTSIRPIGIVVAAYDFNYPIKKDSSSQLLSVQQGETIYILNK----NSSG- 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 LSSKKLCADEECVYTISLARAQEDYNAP-----DCRFIDVKKGQQIYVYSKLVTENGAGE 62
                                                                                                                                                                        22202
                                                                                                                                                                                                           Virginia
                                                                                                                                                                                                                                                     1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                51
                                                                                                                                                                                                                                                                                                                                                                                                                     MOTOKI, MASAO
NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                     MATSUI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAKANISHI, KAZUO
                                                                                                                                                                                       U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                           OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13.3%; Score 78.5; DB 3; Length 1589; 27.0%; Pred. No. 0.64; tive 18; Mismatches 36; Indels 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-164-839-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-583-799-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/08583799 Patent No. 5607849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local (
                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5607849man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
APPLICATION NUMBER: 08/004,729
AFTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: protein
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE:
                                                                                                                                                                       APPLICATION NUMBER: US/08/583;799 FILING DATE:
                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                 CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                    STATE:
                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               392 EVNADTIYWIYQKDGQR-----RKITEDHASYGKNISTKSYYGNHREDYTLHYKYPEGSQ 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          447 KEREVYKKAGRRVTEPSNEI 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31 DYNAPDCRFIDVKKGQQIYVYSKLVTENGAG---EFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88 KEORVYQEATKEI -- PTTDI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                  22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                Virginia
(: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YASULL
NAKANISHI, KAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            694 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                      1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (703)413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MATSU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAGASE,
                                                                                                                                                                                                                                                                                                                                                                                                     OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT P.C.
                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13.0%; Score 77; DB 1; Length 694; 27.5%; Pred. No. 0.31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENE ENCODING TRANSGLUTAMINASE DERIVED FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                 Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

(703)413-2220

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
US-08-164-839-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-583-799-4
                                                                                                                    ) MOLECULE TYPE: protein US-08-164-839-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 6, Application US/08164839 Patent No. 5514573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 27.5 Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acid
                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                   TELEFAX: (703) 413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 08/004,729
FILING DATE: 14-JAN-193
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 694 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 2202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
COMPUTER: COMPATIBLE
COMPUTER: COMPATIBLE
COMPUTER: COMPATIBLE
COMPUTER: COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
NUMBER OF SEQUENCES: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, ADDRESSEE: P.C.
STREET: 1755 Jefferson Davis Highway, Fourth Floor
CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 392 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88 KEQRVYQEATKEI -- PTTDI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31 DYNAPDCRFIDVKKGQQIYVYSKLVTENGAG---EFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                      H: 695 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEREVYKKAGRRVTEPSNEI 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOTOKI, MASAO
NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAKANISHI, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YASUEDA, HISASHI
                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13.0%; Score 77; DB 1; Length 694; 27.5%; Pred. No. 0.31; tive 20; Mismatches 28; Indels
   13.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/164,839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
       Score 77; DB 1; Pred. No. 0.31;
                                          Length 695;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
RESULT 9
US-08-583-799-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
닭
                                 Ş
                                                                          Вb
                                                                                                              Ś
                                                                                                                                                                                                                                        US-08-583-799-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 6, Application US/08583799
Patent No. 5607849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                         Matches
                                                                                                                                                                                               Query Match
                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 6:
                                                                                                                                                                                                                                                       LENGTH: 695 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 695 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5607849man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: NAGASE, KAZUO
APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GREE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: YASUEDA, H
APPLICANT: NAKANISHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, ADDRESSEE: P.C.
                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (703)412-300
TELEFAX: (703)413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/583,799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393 EVNADTIYWIYQKDGQR-----RKITEDHASYGKNISTKSYYGNHREDVTLHYKYPEGSQ 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            448 KEREVYKKAGRRVTEPSNEI 467
448 KEREVYKKAGRRVTEPSNEI 467
                                                                          393 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88 KEORVYOEATKEI -- PTTDI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31 DYNAPDCRFIDVKKGQQIYVYSKLVTENGAG---EFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                   88 KEQRVYQEATKEI -- PTTDI 105
                                                                                                                  31 DYNAPDCRFIDVKKGQQIYVYSKLVTENGAG---EFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T: 1755 Jefferson Davis Highway, Fourth Floor
Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Virginia
Y: U.S.A.
                                                                                                                                                     13.0%; Score 77; DB 1; Length 695; ilarity 27.5%; Pred. No. 0.31; Conservative 20; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
--
```

```
RESULT 11
US-08-630-915A-40
; Sequence 40, Application US/08630915A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-346-510B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-346-510B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 24, Application US/09346510B
Patent No. 6281014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: O'Brien, Timothy J. APPLICANT: Wang, Yinxiang TITLE OF INVENTION: SH3-Contain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/346,510B CURRENT FILING DATE: 1999-07-01 PRIOR APPLICATION NUMBER: 08/871,732 PRIOR FILING DATE: 1997-06-09 NUMBER OF SEQ ID NOS: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE:
TELEFAX: (212) 869-8864/97
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: amino acid sequence of Vav SH3 domain at position 2 OTHER INFORMATION: through position 49 of SEQ ID No. 6281014 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: Domain LOCATION: 2...49 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                  ZIP: 10036-2711

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/630,915A
FILING DATE: 03-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 48
                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
                                             REFERENCE/DOCKET NUMBER: 1101-174
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9990
TELEFAX: (212) 869-8864/9741.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: SPARKS, Andrew B. APPLICANT: HOFFMAN, No. 6309820h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: KAY, Brian K.
APPLICANT: FOWLKES, Dana M.
APPLICANT: MCCONNELL, Stephen J.
APPLICANT: MCCONNELL, Stephen J.
TITLE OF INVENTION: POLYEPPTIDES HAVING A FUNCTIONAL
TITLE OF INVENTION: DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
TITLE OF INVENTION: USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: New York
                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 12.4%; Score 73.5; DB 3; Length 48; Local Similarity 31.6%; Pred. No. 0.021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31 DYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 DFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----VGWFPANYV 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              630982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pennie & Edmonds LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D6221CIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SH3-Containing Protein, DNA and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                       ; TOPOLOGY: unknown ; MOLECULE TYPE: peptide US-08-630-915A-194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-630-915A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-630-915A-194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 194, Application US/08630915A Patent No. 6309820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 194:
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/0:
FILING DATE: 03-APR-1996
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: SPARKS, Andrew B. APPLICANT: HOFFMAN, No. 6309 APPLICANT: KAY, Brian K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 248 amino acid
                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                 TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                            STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 12.1%; Score 71.5; DB 4; Length 248; Local Similarity 36.8%; Pred. No. 0.38;
                                                                                       Local Similarity
                                                                                                                                                                                                                TYPE:
                                                                                                                                                                                                                                                                                                  TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                            NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
321 EGEEILVTQK-----DGEWWTGSI-GDRS-----GIFPSNYVKPKDQESFGSASK 364
                                                                   21;
                                44 KGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNLV--KEQRVYQEATK 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60 EGEEILVTQK-----DGEWWTGSI-GDRS------GIFPSNYVKPKDQESFGSASK 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44 KGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNLV--KEQRVYQEATK 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10036-2711
                                                                                                                                                                                                                                                                                                                                                                                            Misrock, S. Leslie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New York
                                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                  66141 PENNIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1155 Avenue of the Americas
                                                                                                                                                                                                                             509 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        248 amino acids
                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                  (212) 869-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MCCONNELL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FOWLKES, Dana M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pennie & Edmonds LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                                     12.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L, Stephen J.

POLYPEPTIDES HAVING A FUNCTIONAL

DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No. 6309820h
                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/630,915A
                                                                                                                                                                                                                                                                                                                                                                      18,872
                                                                     œ
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8; Mismatches
                                                                                     Score 71.5; DB 4; Length 509; Pred. No. 1.1;
                                                                                                                                                                                                                                                                                                                                                         101-174
                                                                     Mismatches
                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13; Indels 15;
                                                                     Indels 15; Gaps
                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
```

```
US-08-164-839-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: protein US-08-164-839-31
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                         US-08-164-839-33
                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No. 551...
Patent No. 551...
PATENT NET INFORMATION:
VASUEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                               Sequence 33, Application US/08164839 Patent No. 5514573
                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
ANAME: Oblon, No. 5544573man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-599-
                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 31:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/164,839
                                     APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
NUMBER OF SEQUENCES: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
APPLICANT: NAGASE, KAZUO
APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: P.C
                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31, Application US/08164839
5. 5514573
                                                                                                                                                                                                                                                     413 SGVGKNISTKSLYGDYREDVTLHYKYPEGSKKEREVYQKAGHRI 456
                                                                                                                                                                                                                                                                                                                               356 ELSDGEYCCGPCPVTAIKEGNLSVKYDAP---FIFAEVNADIIYWMAGPGGERKKIDVDQ 412
                                                                                                                                                                                                                                                                                         58 NGAGE-FWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEI 100
                                                                                                                                                                                                                                                                                                                                                                                                           27;
                                                                                                                                                                                                                                                                                                                                                                     7 KLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVY-----SKL-VTE 57
                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 687 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAKANISHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YASUEDA, HISASHI
                                     NAKANISHI, KAZUO
MOTOKI, MASAO
NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                               YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                           12.1%; Score 71.5; DB 1; Length 687; 26.0%; Pred. No. 1.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                             19; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                               45; Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                               4.
```

```
; TYPE: amino ac
; TOPOLOGY: line
; MOLECULE TYPE: I
US-08-164-839-33
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                               US-08-583-799-31
                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                            Sequence 31, Application US/08583799 Patent No. 5607849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 248855 OPAT UR INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: FROM FISH NUMBER OF SEQUENCES: 72
                                                                                                                                                  APPLICANT: NAGASE, KAZUU
APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5514573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 10 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                  APPLICANT: YASUEDA, H
APPLICANT: NAKANISHI,
APPLICANT: MOTOKI, MA
                                                                                                                                             CORRESPONDENCE ADDRESS
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Arlington
STATE: Virginia
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (705) -- TELEPHONE: (703) 413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Oblon, No. 5514573man F. REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/164,839 FILING DATE:
                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                       413 SGVGKNISTKSLYGDYREDVTLHYKYPEGSKKEREVYQKAGHRI 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             356 ELSDGEYCCGPCPVTAIKEGNLSVKYDAP---FIFAEVNADIIYWMAGPGGERKKIDVDQ 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58 NGAGE-FWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEI 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 KLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVY-----SKL-VTE 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22202
                    22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   687 amino acids
                                 U.S.A.
                                                                                                                                                                                                                                                    MOTOKI, MASAO
                                                                                                                                                                                                                                                                                        YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                      OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (703) 412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12.1%; Score 71.5; DB 1; Length 687; 26.0%; Pred. No. 1.6;
                                                                                                                                                                                                                                                                         KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13;
```

4

```
Command line parameters:

MODEL-frame+ p2n.model -DEV=xlh
-Q=/Ggn2_1/USPTO_spool/US10019455/runat_29122003_160347_240/app_guery.fasta_1.1770
-Q=/Ggn2_1/USPTO_spool/US10019455/runat_29122003_160347_240/app_guery.fasta_1.1770
-DB=GenEmbl -QFMT=fastap -SUFFIX==ge -MINMATCH=0.1 -LOOPECL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCCALIGN=200 -THR_SCORE=pct -THR_MAXIL00 -THR_NUN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM-ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER-US10019455_@CGN 1 1 6034 @runat 29122003 160347 240 -NCPU=6 -ICPU=3
-NO-MMAP -LARGEQÜERY -NEG_SCORES=0 -MÄIT -DSPBLOCK=100 -LONGLOG
-DEU TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              December 29, 2003, 16:11:59; Search time 1810.69 Seconds
     Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2888711 seqs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                            gb pl:

gb pr:

gb pr:

gb sy:

gb sy:

gb vi:

gb vi:

gb vi:

em ba:

em fun:

em hum:

em hum:

em nu:

em or:

em or:
                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_ov:*
                                                                                                                                                                                                                                                                                                                                                                                             gb_pat:*
em_pat:
em_ph:
em_pl:
em_ro:
em_sts:
em_un:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (without alignments)
2485.278 Million cell updates/sec
```

```
29: em_vi:*
30: em_htg_hum:*
31: em_htg_other:*
32: em_htg_other:*
34: em_htg_mus:*
35: em_htg_pln:*
36: em_htg_mam:*
37: em_htg_vrt:*
37: em_htg_other:*
41: em_htgo_mus:*
41: em_htgo_cther:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

C 44 45	C 42		40		37	c 36	w	ω A		3 Z 2 Z	ب د د	2 2		27	26	25	24	23	22	21	20	19	18		16	7 F		112	11	10	9	00	7	on I	ហ	4.	(L)	N	1	Result No.
1.	σ	61.	61.	61.	61.	62.	62.	93	98.	965	A 4	400.0	٦٥	0	4	547	547	547	547	547	547	547	547	547	547	547	5 L L L L	T U T	574	574	591	9	591	9	591	9			591	8
44.2 44.2	44.2 44.2	44.2	44.2	44.2	44.2	44.4	4.	. 7	5	67.5			00 C	Ņ	92.6	ν.	2	N	2					N	2 !	9 0	u -	٠.	٠,	7.	0	0		0					100.0	ery
459 459	459 459	S	396	oω	w	4	44	47	1558	466	7 7 7	na) C	307	1422	923	923	σn.	846	521	521	521	521	384 4	384	ب د د د د د د د د د	204	υ υ υ α 4. 4	ıω	330	S	958	947	4	929	œ	œ	u	330	ength
	σν σν	σ	12	o o	σ.	σ	σ				ס ע	n u	1 0	10	9	თ	ത											nσ	י סי	σ	10	0			10	σ			σ .	DB .
22.23	AX016785 AX252508		BT007775	2 8	Ψ	3184	4	BX510362	AC106161	AF233519	#D043130	J F	ייי	083	SA2425	121	82	5	9	AX491252	AX454774	AX362311	AX358818	BD093103	BD010802	BD093117	BD010816		J W	D01083	AF233333	MMU243939	BD093122	BD010821	AF243504	10	080	931	BD010817	ID
87209 Sequenc 450 H.sapiens	1678 5250	2 Seq	BT007775 Synthetic	16802 Sequenc	959	31840 Sequence	31430 Sequenc	10362 Mus n	06161 Rattu	33519 Rana c	BD043130 Novel pol	DIO GAITUS	STATE NOVEL P	10830 Novel po	42552 Homo s	93121 Novel	10820 Novel	43505 Homo	261	1252	774	μ	8818 Sequence	3103 Novel po	2 Novel	3117 Novel	BD010816 Novel bol	TAYON 9212	Novel	36 Novel	3333 Mus	43939 Mus n	22	0821 Novel	43504 Mus mus	3106 Novel	2080	93118 Novel	10817 Novel	Description

ALIGNMENTS

```
VERSION
KEYWORDS
                                                         밁
                                                                                        Ş
                                                                                                                              밁
                                                                                                                                                           Ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-26 (1-110) x BD010817 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3D010817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                     101
                                                                                                                                  181
                                                                                                                                                                                                         121
                                                                                            81
                                                                                                                                                       61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                             41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAspGlyAla 60
                                                                                                                                                                                                                                                                               61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PC C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50,G01N33/53//
PC C12P21/08,C12N15/00,A61K37/02,C12N5/00
CC Location/Qualifiers
FT source 1.330
FT /organism='Mus sp. (mcuse)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 18 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
OS Mus sp. (mouse)
PN JP 2001069994-A/18
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP 2001069994-A/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD010817.1 GI:18639190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD010817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and DNA thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P
P
I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SHINICHI MOGI
ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                    TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                             HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A61P19/08
                                                                                                                                                                                                        GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                        CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 60
                                                                                          TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      yource 1. .330 /organism='Mus sp. (mouse)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
t 60 c 92 g
                                                                                                                              TTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.4e-62
591.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330
110
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 31-JAN-2002
                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION ACCESSION
                            S
                                                                       밁
                                                                                                       Ş
                                                                                                                                            밁
                                                                                                                                                                                S
                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                              밁
밁
                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-26 (1-110) x BD093118 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                              B:
                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
241
                                                                       181
                                                                                                                                                121 GATGTCAAGAAAGGGCAGCAGCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                81
                                                                                                         61
                                                                                                                                                                                  41
                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                          21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                               1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOVEL POLYPEPTIGE AND ITS DNA
PATENT: WO 0102564-A 18 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ito,Y., Nishi,K., Ogi,X., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BD093118.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel polypeptide and its DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO 0102564-A/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD093118
TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                   TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                         GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                              GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                       AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                       TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A61K38/17
                                                                                                                                                                                                                                                                                                CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus sp. (mouse)
WO 0102564-A/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
/db_xref="taxon:10095"
60 c 92 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                           5.4e-62
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:22638706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 27-AUG-2002
```

300

80 180 60 60

```
S
                                                                               å
                                                                                                                    Ś
                                                                                                                                                            밁
                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                          US-10-019-455A-26 (1-110) x BD010805 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD010805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                               175 GATGTCAAGAAAGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                              115 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent: JP 2001069994-A 6 21-MAR
TAKEDA CHEMICAL INDUSTRIES LTD
OS Mus sp. (mouse)
PN JP 2001069994-A/6
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
PR
                        61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                     41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                     21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                           55 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A61P19/08,
PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
CFH Key
FH Key
FT source
FT /organi
                                                                                                                                                                                                                                                                    1 HisGlyValPheMetAspLysLeuSerSerLysLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 384)
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 6 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PI YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI MOGI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD010805.1 GI:18639178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel polypeptide and DNA thereof. BD010805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP 2001069994-A/6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProThrThrAspIleAspPhePheCysGlu 110
GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source 1. .384 /organism='Mus sp. (mouse)'. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
                                                                                                                                                                                                                                                                                                                                                                                6.35e-62
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  o
83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  107 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 31-JAN-2002
                                                                               234
                                                                                                                      60
                                                                                                                                                              174
```

```
,8
                                S
망
                                                                          밁
                                                                                                                                                밁
                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                         US-10-019-455A-26 (1-110) x BD093106 (1-384)
                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                      Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                       115 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                          41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            355 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     295 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 354
                                                                                                                                                   55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                         21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                     1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel polypeptide and its DNA
patent: WO 0102564-A 6 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ito,Y., Nishi,K., Ogi,K., Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO 0102564-A/6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD093106.1 GI:22638694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD093106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and its DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HIDEYUKI TANAKA
                                                                                                                                                TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOGI,
VUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Кеy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus sp. (mouse) WO 0102564-A/6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Mus sp."
                                                                                                                                                                                                                                                                            100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                       6.35e-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Okubo, S., Mogi, S., Noguchi, Y.,
                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                  107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 27-AUG-2002
 234
                                                                          174
                                                                                                                                                  114
```

61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
AF243504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                              Ş
                                                                                                 밁
                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                  US-10-019-455A-26 (1-110) x AF243504 (1-929)
                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          295 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       355 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81 TyrPheProSerAsnLeuVallysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                     63
                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 929)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus fibrocyte-derived AF243504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cohen-Salmon, M., Frenz, D., Verpy, E., Voegeling, S. and Petit, C. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mesenchyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF243504.1 GI:11991841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      du Dr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (09-MAR-2000) Biotechnologies, Institut Pasteur, 25 rue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Petit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cohen-Salmon, M., Frenz, D., Liu, W., Verpy, E., Voegeling, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AF243504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0998416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProThrThrAspIleAspPhePheCysGlu 110
TyrThr11eSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPhe11e 40
                                                                                                                                          HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                     CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biol. Chem. 275 (51), 40036-40041 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              p, a new fibrocyte-derived protein related to MIA/CD-RAP, has vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 929)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roux, Paris 75015,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /Godon_start=1
/product="fibroyte-derived protein"
/protein_id="AAG42355.1"
/db_xref="GI:11991842"
/db_xref="GI:11991842"
/translation="MARILILLGGLV/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILLGGLVY/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILLLGGLVY/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILLL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILLL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADEECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADECVYTISLA
R/translation="MARILILL"/LCAGHGVFMDKLSSKKLCADECVYTISLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="Fdp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'gene="Fdp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                         100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.64e-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      France
                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein (Fdp) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                  929
110
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROD 26-DEC-2000
                                                                                                     122
```

```
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD010821
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
          ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                            US-10-019-455A-26 (1-110) x BD010821 (1-947)
                                                                                                Query Match:
                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                  Score:
                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 TyrpheDroSerAsmLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 22 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 947)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S R G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JP 2001069994-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD010821.1 GI:18639194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel polypeptide and DNA thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD010821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                              G01N33/53/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGAA 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAGTTTTGGGCTGGCAGTGTTTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                A61P19/08
                                                                                                                                                                                                                                        279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                              C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus sp. (mouse)
JP 2001069994-A/22
                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                        /organism='Mus sp. (mouse)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-MAR-2001
                                                                                                                                                                                                                                      Ø
                                                                                                                                                                                                                               /mol_type="genomic DNA"
/db_xref="taxon:10095"
158 c 221 g 28
                                                                                                                                                                                                                                                                                      organism="Mus sp."
                                                                                            1.68e-61
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                        .947
                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                        1. .947
                                                                                            Mismatches:
Indels:
                                                                                                                                                Length:
Matches:
                                                                                                                                    Conservative:
                                                                                                                                                                                                                                          289
                                                                              947
110
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
```

밁

8

CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTC

```
Best Local Similarity:
Query Match:
                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
US-10-019-455A-26 (1-110) x BD093122 (1-947)
                                                              Percent Similarity:
                                                                                         Pred. No.:
                                                                                                    Alignment Scores:
                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BD093122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  245
                                                                                                                                                                                                                                                                                                                                          OGI, SHOICHI OKUE
HIDEYUKI TANAKA
OS Mus sp. (mou
PN WO 0102564-r
PD 11-JAN-2001
PF 29-JUN-2999
PR 30-JUN-1999
PI YASUAKI ITO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 947)
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA Patent: WO 0102564-A 22 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES IND, YASUNGKI ITO, KAZUNORI NISHI, KAZUHIRO
                                                                                                                                                                                                                         55 SE
                                                                                                                                                                                                                                                                                        Dd
Id
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO 0102564-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD093122.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel polypeptide and its DNA. BD093122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD093122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                             A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIie 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                             279
                                                                                                                                                                                                                         Key
                                                                                                                                                                                                                                                                                     YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/17,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                       11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                     SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
                                                                                                                                                                                                                                                   02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                              Mus sp. (mouse)
WO 0102564-A/22
                                                                                                                                                                                                                                                             A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                            മ
                                                                                                                                          Location/Qualifiers
                                    1.68e-61
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:22638710
                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    947 bp
                                                Length:
Matches:
Conservative:
Mismatches:
                       Indels:
Gaps:
                                                                                                                                            289 €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                        947
110
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MMU243939
LOCUS
                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                               SdD
                                                                                                   5'UTR
                                                                      sig_peptide
                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65
                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 958) Rendtorff, N.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MMU243939
                                                                                                                                                                                                                                                                                                                                                                   21100875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Mial gene).
                                                                                                                                                                                                                                                                                                                                                     .1161796
                                                                     /gene="Mial"
23. .81
                               /gene="Mial"
                                                          /gene="Mial"
                                                                                                           /gene="Mial"
                                                                                                                                                                                                                                   . 958
```

```
125 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (20-JUL-1999) Rendtorff N.D., Department of Medical Genetics, Institute of Medical Biochemistry and Genetics, Blegdamsvej 3, 2200 Copenhagen N, DENMARK Related sequence: AJ242552.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent polymorphism that abolishes translation Genomics 71 (1), 40-52 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               melanoma inhibitory activity-like protein; Mial gene
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus mRNA for melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rendtorff,N.D., Frodin,M., Attie-Bitach,T., Vekemans,M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AJ243939.1 GI:12619174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTCAAGAAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
/codon_start=1
/product="melanoma inhibitory activity-like protein"
/protein_id="CAC27444.1"
/db_xref="GI:12619175"
                                                                                                                                                                                                                                                                                                                                                                /tissue_type="whole fetus"
/dev_stage="12.5 pc"
1. .958
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /map="79.4-80 cM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibitory activity-like protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROD 29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
AF233333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-26 (1-110) x MMU243939 (1-958)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                       TITLE
                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                     JOURNAL
                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                           PUBMED
 CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Мо
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78
                                                                                                                                                                                                                                                                                                                                                                                                                                             1054
Mus musculus otoraplin mRNA,
AF2333333
                                                                                                                                   2 (bases 1 to 1054)
Robertson,N.G., Heller,S., Lin,J.S., Resendss,B.L., Weremowicz,S., Denis,C.S., Bell,A.M., Hudspeth,A.J. and Morton,C.C.
Direct Submission
                                                                                                                                                                                                                                     1 (bases 1 to 1054)
Robertson,N.G., Heller,S., Lin,J.S., Resendes,B.L., Weremowicz,S., Denis,C.S., Bell,A.M., Hudspeth,A.J. and Morton,C.C.
A novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping
Genomics 66 (3), 242-248 (2000)
                                                                                              Submitted (10-FEB-2000) Pathology, Br. Francis Street, Boston, MA 02115, USA
                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                  AF233333.1 GI:8927429
                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyGluPheTzpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATEGIGIATTIATEGATAAACTITCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MARILILLEGLLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS NLVKEQRVYQEATKEIPTTDIDFFCE"
411. .>958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="Mial"
/db_xref="taxon:10090"
18. .404
                              /organism="Mus musculus"
/mol_type="mRNA"
                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.7e-61
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp mRNA
complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 299 t
                                                                                                                     Brigham and Women's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ROD 06-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
```

```
BD010836
                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Quary Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-26 (1-110) x AF233333 (1-1054)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                            TITLE
                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       132 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72
                                                                                                                      Patent: JP 2001005757....
TAKEDA CHEMICAL INDUSTRIES LTD
CS Rattus sp. (rat)
EN JP 2001069994-A/37
                                                                                                                                                                                        Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mog
Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 37 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                      PPPS
                                                                                                                                                                                                                                                                                                                              Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                  BD010836.1 GI:18639209 JP 2001069994-A/37.
                                                                                                                                                                                                                                                                                                                                                                                                  Novel polypeptide and DNA thereof. BD010836
                                                   SHINICHI MOGI
                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                      BD010836
I YUKO NOGÜCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
C C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02,
A61P19/08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATTGGAATTGTAGGT 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspVallysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           296
                                                                    YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                      29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/product="otoraplin"
/protein_id="AAF82079.1"
/db_xref="GI:8927430"
/translation="MARILILLEGELVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
NLVKEGRVYQEATKE.PTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="OTOR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.88e-61
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         183 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         265 g
                                                                                                                                                                                                                                                                                                                                                                                                                                      330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           310 t
                                                                                                                                                                                                                                            Mogi,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19:
                   g
```

```
RESULT 11
BD093137
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-26 (1-110) x BD010836 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                           CEYWORDS
                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
OGI, SHOICHI OKUBO, SHII
HIDEYUKI TANAKA
OS Rattus sp. (rat)
PN WO 0102564-A/37
PD 11-JAN-2001
PF 29-JUN-2000 WO 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PC C07K14/
G01N33/53//
PC C12P21/
CC Key
FT Source
FT /organi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                   Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Novel polypeptide and its DNA
Patent: WO 0102564-A 37 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                    Rattus sp.
Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                       Novel polypeptide and its DNA
                                                                                                                                                                                                                                                     Rattus.
                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                               WO 0102564-A/37.
                                                                                                                                                                                                                                                                                                                                                                                  BD093137.1 GI:22638725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGCATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                   (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C12P21/08, C12N15/00, A61K37/02, C12N5/00
    11-JAN-2001
29-JUN-2000 WO 2000JP004278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
62 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.91e-60
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                             ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 27-AUG-2002
```

á В Ś Ś

Ś 밁 Ş

밁

```
RESULT 12
BD010835
                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-26 (1-110) x BD093137 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                       Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                                                                                                                                  VERSION
                                                                                      TITLE
                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 TATACCATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                   Rattus sp. Rattus sp.
Patent: JP 2001069994-A 30 21-7
TAKEDA CHEMICAL INDUSTRIES LTD
OS Rattus sp. (rat)
PN JP 2001069994-A/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                Novel polypeptide and DNA thereof. BD010835
                                                                                                                                                                               Eukaryotā; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                            BD010835.1 GI:18639208 JP 2001069994-A/36.
                                                               Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mog
Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 36 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                       BD010835
                                                                                                                                                                                                                                                                                                                                                                                                                                      ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                    CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                          (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31:/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
62 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.91e-60
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38
t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
```

```
BD093136
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                           REFERENCE
                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-26 (1-110) x BD010835 (1-384)
                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                             ERSION
                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               175 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    355 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                       295 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
FT Key
FT source
FT /organis
                                                                     Rattus sp.
Rattus sp.
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SHINICHI MOGI
PI YUKO NOGI
PC C12N15/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Yoshimura,K. and Tanaka,H. Novel polypeptide and its DNA
                                                                                                                                                                                                           Novel polypeptide and its DNA. BD093136
                                                                                                                                                                        WO 0102564-A/36.
                                                                                                                                                                                           BD093136.1 GI:22638724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                       (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-MAR-2001
29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Rattus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.96e-60
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                 384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                     DNA
                                       Mogi,S., Noguchi,Y.
                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                     PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114
```

밁

Ş

Ś В र्

REFERENCE

밁

8 B Ś 밁 Ş

```
RESULT 14
BD010816
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-26 (1-110) x BD093136 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                        KEYWORDS
                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                         101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                175 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                    355 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                   295 TATTTCCCCAGCAACTTGGTTAGAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55 CATGGCATGTTTATGGATAAACTTTCTTATGAGAAGTTGTGTGCAGATGAGGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 330)
                                                                                                                        BD010816
BD010816.1 GI:18639189
                                                              Homo sapiens
                                                                               Homo sapiens (human)
                                                                                                        JP 2001069994-A/17.
                                                                                                                                                              Novel polypeptide and DNA thereof.
                                                                                                                                                                                     BD010816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HIDEYUKI TANAKA
OS Rattus sp. (rat)
PN WO 0102564-A/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent: WO 0102564-A 36 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                          TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02, C12R1:19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.96e-60
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                   DNA
                                                                                                                                                                                   PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174
```

```
RESULT 15
BD093117
                                                  DEFINITION
ACCESSION
VERSION
                  SOURCE
                                                                                                   LOCUS
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                               ß
                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-26 (1-110) x BD010816 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
                                                                                                                                                                   301
                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                              41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                21 TyrThrileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                BD093117.1 GI:22638705
WO 0102564-A/17.
                                                                Novel polypeptide and its DNA. BD093117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A61P19/08,
PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
CC FH Key
FT source
FT /organi
Homo sapiens (human)
                                                                                                 BD093117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel polypeptide and DNA thereof Patent: UP 2001669994-A 17 21-MAR-2001; TAKEDA CHEMICAL INDUSTRIES LTD OS Homo sapiens (human) PN JP 200169994-A/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHINICHI MOGI,
PI YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
PC C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                         TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 240
                                                                                                                                                                                                                                                                                                            GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                    ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                            TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                           AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                        TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="genomic DNA"
/db_xref="taxon:9606"
60 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.03e-56
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                              330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                DNA
                                                                                              linear
                                                                                              PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΡI
```

```
밁
                                    S
                                                                                                       Š
                                                                                                                                                 망
                                                                                                                                                                              Ś
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-26 (1-110) x BD093117 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
 301
                                                                                                                                                   181
                                                                    241 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                    121 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                  61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                         41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                           61 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                      21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                           ۳
                                                                                                                                                                                                                                                                                                                                                                                         1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel polypeptide and its DNA
Patent: WO 0102564-A 17 11-JAN-2001,
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KA
OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRTPROS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 330)
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                  ProThrThrAspIleAspPhePheCysGlu 110
CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                        TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                        CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
YUKIN NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
YUKIN15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
WO 0102564-A/17
11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="genomic DNA"
/db_xref="taxon:9606"
60 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.03e-56
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KAZUHIRO
                                                                                                                                             240
                                                                                                                                                                                                                      180
                                                                                                                                                                                  80
                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                        60
```

Search completed: December 29, Job time : 1812.69 secs

2003, 19:57:20

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

```
-MODEL-frame+ p2...model -DEV=x1h
-MODEL-frame+ p2...model -DEV=x1h
-Q=/cgn2_1/USPTO_spool/US10019455/runat_29122003_160347_254/app_query.fasta_1.1770
-Q=/cgn2_1/USPTO_spool/US10019455/runat_29122003_160347_254/app_query.fasta_1.1770
-DB=EST -QEMT=fastap -SUFFIX.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=biosum62 -TRANS=human40.cdi -LIST=45
-DCALIGN=2200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15 -MODE=LOCAL
-DUTFMT=pto -NORM=ext -HEARSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER-US10019455 @CGN 1_1_6063 @runat_2912003_160347_254 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPOEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     December 29, 2003, 16:23:14; Search time 1138.05 Seconds
             10:
111:
12:
13:
13:
14:
16:
16:
16:
17:
18:
19:
20:
21:
22:
22:
23:
24:
25:
26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22781392 seqs, 12152238056 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em em estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb estrol
gb 
em_gss_pro:*
em_gss_rod:*
em_gss_phg:*
em_gss_vr1:*
gb_gss1:*
                                                                                                                                                                                                                                                                                                                                                                                      em_gss_inv:*
em_gss_inv:*
em_gss_pln:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em estov: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            em_estin:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_esthum: *
                                                                                                                                                                                                                em_gss_mam:*
em_gss_mus:*
                                                                                                                                                                                                                                                                                                        em_gss_fun:*
                                                                                                                                                                                                                                                                                                                                                   em_gss_vrt:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estom:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                estmu:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (without alignments)
2349.180 Million cell updates/sec
```

29: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

100 100 100 100 100 100 100 100 100 100	Score 591 591 591 591 591 591		41 884608048	13 13 13 13 13 13	 Q57003 Q56460 Q56849 Q566413 Q566974 Q566494 Q56376	scriptic 9570035 Q570035 Q564607 Q568498 Q569741 Q569741 Q569741 Q568474 Q568474 Q568474 Q568474 Q568474
11000000000000000000000000000000000000	្រ ⊔ ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស	00000000000000000000000000000000000000	52 60 60 60 60 60 60 60 60 60 60 60 60 60	100113333333333333333333333333333333333	564113 56494 56376 56376 56541 74824 74824	64134 911 64974 911 68471 911 68471 911 63768 91 611549 886 65632 914 66632 917 66734 916 67343 916 32622 BY 32622 BY
0 2 2 2 2 2 2 4 4 7 6 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	74905031	75665055	10000U45545	2 13 13 13 13 13 13 13 13 13 13 13 13 13	00000000000000000000000000000000000000	748241 CH 566776 gi 568785 gi 25854 AL9 047965 Mu 563227 gi 563224 df 250404 MG
c 25	262.5	4 4 5 4 4 5 4 4 1	W 44 W		143	0404 143 2 5892
3 2 2 2 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5	25.25	444	4 N L		3498 340	8982 897 n 297 n
	22222	4444	2000		1593 5647 7425 9273	5936 UI- 6478 K-E 4250 UI- 2734 AGE
1 E E E E E E	261.5	444444444444444444444444444444444444444	522 522 522 522 522 522 522 522 522 522	12213	1577 1577 1945 7917 7663	A A 10 10 10 0
00 00	7 7 8 8 C F		~ o − ~ o 4		CA509768 AV592759 BE665724 AI620915 BF439750	\$509768 UI \$592759 AV5 \$665724 15 620915 tu0 \$7439750 na

AL I GNMENT

REFERENCE	ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION		DEFINITION	Locus	BQ570035	RESULT 1
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 398)	Mus musculus	Mus musculus (house mouse)	EST	BQ570035.1 GI:21473352	BQ570035	clone gi143b10 5', mRNA sequence.	gil43b10.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNF	BQ570035 398 bp mRNA linear EST 19-JUN-2002		

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: 143 row: b column: 10 Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Kachar,B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNAse H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EIO Gold and, upon titration on XLI Blue MRP cells, the yield of the phage library was estimated to be 11,100,000 respectively. Stratagene's ExAssist Interference
                           resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs the 5 end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Wallham, MA), and analyzed on 3700 automated capillary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ. Organ of Corti; Vector: pBluescript; The
/note="Organ. Organ of Corti; Vector: pBluescript; The
organ of Corti (CC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from p6; 60 from P7; 46 from p8; 18 from p9; 20 from p10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
sequencers using POP5 polymer (Applied Biosystems, Foster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap xR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . .398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _type="mRNA"
```

```
RESULT 2
BQ564607
                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-26 (1-110) x BQ570035 (1-398)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Snoor
                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
0.
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 367 CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  488 bp mRNA linear EST 19-JUN-200: gil9h02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil9h02 5', mRNA sequence.
                                                                 Plate: 19 row: h column: 02
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                            Kachar,B. EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                      Structural Cell Biology
                                                                                                                                                                                                                                                                           Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 488)
                                                                                                                                     Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                       National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ564607.1 GI:21467924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 3 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATTGGAAGTTGTAGGT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105 a
                                                                                                                                                               301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 69 c 116 g 108 t
/mol_type="mRNA"
                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.28e-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
```

```
Query Match:
                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                    143 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Unizap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcribtase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with Sho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp. respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with ECOR I and Xho I. The phagenid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, carlsbad, CA) as instructed by the manufacturer. ESTs from the State and the the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with the concerted with 
                                                                                                                                                                                                                                                                                                                                               strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Forgan: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P9; 46 from P8; 18 from P9; 20 from P10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strain="BALB/c"
4.38e-73
591.00
100.00%
100.00%
100.00%
                                                                               Mismatches:
                                                                                                                     Conservative:
                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-26 (1-110) x BQ564607 (1-488)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ568498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361 CCAACCACGGATATTGACTTCTTCTGTGAA 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: 109 row: c column: 02
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ568498 514 bp mRNA linear EST 19-JUN-2002 gi109c02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kachar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ568498.1 GI:21471815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone gi109c02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCCACCAAGGAGATC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 514)
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan: Organ of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; The
/note="Torgan of Corti; Vector: pBluescript; Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
/clone="gi109c02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cype="mRNA"
```

```
US-10-019-455A-26 (1-110) x BQ568498 (1-514)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                           179 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 238
                                                                                                                                                                                                                                                                                                                                                                119 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 178
                                                         61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGÁGATGGGÁATTGTÁGGT 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721), Stratagene) and Uni-Zap XR vector kit (catalog # 23721), Stratagene and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237012), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Fu DNA polymerase, ligated with Ecor I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNA was then directionally ligated to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                respectively. The CONA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with ECOR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's EAAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACACTATGACT) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3%.2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." a 85 c 143 g 139 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          catalog # K1593-02; Invitrogen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Carlsbad, CA), according
```

망 Ś 밁 Ş

Ş 밁

Query Match:

SCOTE:

BASE COUNT

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ564134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       359 CCAACCACGGATATTGACTTCTTCTGTGAA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81 TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 534 bp mRNA linear EST 19-JUN-2002
gilld01.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gilld01 5', mRNA sequence.
B0564134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ564134.1 GI:21467451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ564134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 534)
vector, kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La JOlla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribease (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from p6; 60 from p7; 46 from p8; 18 from p9; 20 from p10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               library construction were carried out with the Uni-Zap XR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               row: d column: 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone="gilld01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strain="BALB/c"
```

```
US-10-019-455A-26 (1-110) x BQ564134 (1-534)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGGGGGATGAGGAGTGTGTC 116
gil35f01.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil35f01.5', mRNA sequence.
8Q569741
8Q569741.1 GI:21473058
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                           BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         columns to enrich for CDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF, cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual CDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlabad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGARACACCTATCACC) and 25% and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from the CONCENTRACO and 25% trendth B16TDVs from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 55 a 87 c 148 g 144 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and Clontech Chroma Spin-1000 (Clontech, Palo Alto,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      591.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.97e-73
                                                                                                                                                                                                                                                           560 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                      EST 19-JUN-2002
```

ORIGIN

BQ569741 LOCUS

VERSION ACCESSION DEFINITION

EYWORDS

Ś

밁

Ş

밁 δ B S 밁 Ş 밁

밁

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OKGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: kacharb@nidcd.nih.gov
Plate: 135 row: f column: 01
Seg primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 560)
/dev_stage="Moste Antal day 5 to 13"
//dev_stage="Moste Antal day 5 to 13"
//clone lib="Mouse Organ of Corti; Vector: pBluescript"
//clone lib="Mouse Organ of Corti; PBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from p6; 60 from P7; 46 from P8; 18 from P9; 20 from p10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Pasturack kit
(catalog # X1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 23721; Stratagene) and Uni-Zap XR
reverse transcribed using the micro Pasturack
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcribed with
EOR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA)
respectively. The cDNA was tren directionally ligated to
the Uni-ZAP XR vector, which had been predigested with
EOR I adapters in the pragency as Exassist Interference
resistance helper phage (catalogue # 21123) was adopted
to rescue plasmid DNA from the phages. Upon plating of the
rescued library, individual cDNA clones were selected and
grown in 96-well. 2 ml growth plate. Plasmid DNA was
from the phage in saturated by the manufacturer. ESTs from
the process of the cDNA from t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="gi135f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Deafness and other Communication Disorders
```

```
US-10-019-455A-26 (1-110) x BQ569741 (1-560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360 CCAACCACGGATATTGACTTCTTCTGTGAA 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGCGGATGAGGAGTGTGTC 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ564944 608 bp mRNA linear EST 19-JUN-200: gi27g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi27g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                            Tel: 301-402-1599
Fax: 301-402-1765
Email: kacharb@nidcd.nih.gov
                                                                                                                                                                            Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                          EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 608)
                                                                                                                   National Institute of Deal 50/4249 South Drive, NIH,
                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                  Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ564944.1 GI:21468261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ564944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         160 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.00%
      row:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.32e-73
591.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
g column: 09
                                                                                                                       Deafness and other Communication Disorders IIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 19-JUN-2002
```

á 밁 ş 밁 S 밁 Ş B Ş 밁 Ş

BQ564944

RESULT 6

COMMENT

Pred. No.: Alignment Scores:

5.98e-73 591.00

Length: Matches:

110

JOURNAL TITLE REFERENCE

AUTHORS

SOURCE

EYWORDS ERSION ACCESSION

```
FEATURES
    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: M13RP1 reverse primer (ABI).
    169 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dev_gage="Nost nattal day 5 to 13"
//clone_lib="Mouse Organ of Corri; Vector: pBluescript"
//clone_lib="Mouse Organ of Corri; Vector: pBluescript; The
//clone_lib="Mouse Organ of Corri; Vector: pBluescript; The
//clone_lib="Mouse Organ of Corri; Vector: pBluescript; The
//clone_lib="Mouse Organ of Corri; Vector: pBluescript; The
//criptor of Corri (OC) was fire dissected from a total of 386
//criptor of Corri (OC) was fire dissected from a total of 386
//criptor of Corri (OC) was fire dissected from 20 of the
//criptor of Corri (OC) was fire dissected from 20 of the
//criptor of Corri (OC) was fire dissected on the corriginals by
//criptor of the corrical was chipped away, stria vascularis
and spiral ligament were removed and the sensory
//capsule of the corbina was chipped away, stria vascularis
and spiral ligament were removed and the sensory
//capsule of the corbina was chipped away, stria vascularis
and spiral ligament were removed and the sensory
//capsule of the corbina was carried out of the modiolus.

Total RNA, was extracted using the micro Pasturack kit
(catalog # 23721, bratagene) and Uni-Zap XR
//capsule of the corbinal was removed and the sensory
//capsule of the corbinal was stratagene (La Jolla, Ch, USA), according to
//capsule of the corbinal was strated out with the Uni-Zap XR
//capsule of the corbinal was strated out with the Uni-Zap XR
//capsule of the corbinal was strated out with the Uni-Zap XR
//capsule of the corbinal was sequentially size fractionated
//capsule of the corbinal was sequentially size fractionated
//capsule of the corbinal was sequentially size fractionated
//capsule of the phage (Loue, Pirst strangeribed with Gigapak
//capsule of the phage (Loue, Pirst strangeribed with Gigapak
//capsule of the phage (Loue, Pirst strangeribed with Gigapak
//capsule of the phage (Loue, Pirst strangeribed with Gigapak
//capsule of the phage (Loue, Pirst strangeribed with Gigapak
//capsule of the phage (Loue, Pirst strangeribed with Gigapak
//capsule of the phage (Loue, Pirst strangeribed wi
                                                                                                                                                strength BigDye terminator sequencing chemistry (Applied Blosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 107 c 166 g 166 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . .608
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ568471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-26 (1-110) x BQ564944 (1-608)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone gi108g04 5', mRNA sequence.
BQ568471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ568471 630 bp mRNA linear EST 19-JUN-2002 gi108g04.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                      Plate: 108 row: g column: 04
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ568471.1 GI:21471788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 630)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                      kacharb@nidcd.nih.gov
/dev_stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="gi108g04"
                                                                                                                                                                                                                                                                                /strain="BALB/c"
                                                                                                                                                                                                         sex="male and female"
                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
                                                                                                                                                                                                                                                                                                     type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 19-JUN-2002
```

was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory pital property of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory for a light of the modiculus. Total RNA was extracted using the micro Pasturack kit catalog # 23721, Notrogen, Carlabad, CA). according to manufacturer's instructions the micro pasturack property of the control of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the modiculus of the micro pasturack kit catalog # 23721, Strategene and University of the form strategene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 15 ug mRNA was primed with the linker primer and transcribed using primed with the linker primer and transcribed using woloney murine leukemia virus reverse transcriptase (MMLV-RT) and Senethyl GCTP. The second strand was primed with the linker primer and transcribed using woloney murine leukemia virus reverse and RNase H. Complementary NNA was blunt ended with PSU DNA polymerase, ligated with ECOR I adopter in the presence of ligase and digested with the corn part of the presence of ligase and digested with Mo I. The cDNA was sequentially size fractionated with No I. The cDNA was greater than 400p and 1000 by respectively. The CDNA was preater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clumms to enrich for cNNAs greater than 400p and 1000 by clum

밁 Ś 8 Ş US-10-019-455A-26 (1-110) x BQ568471 (1-630) Query Match: Best Local Similarity: Percent Similarity: Alignment . No.: Scores: 41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60 67 1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40 100.00% 591.00 6.29e-73 Mismatches: Indels: Conservative:

BASE COUNT

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
BQ563768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ563768 684 bp mRNA linear EST 19-JUN-200: gi06c09.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi06c09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Structural Cell Biology
National Institute of Deafness and other Communication
S0/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \operatorname{EST} analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: 06 row: c column: 09
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ563768.1 GI:21466749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGTTTTGGGCTGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 684)
                                                                                 /dev stage="mark and temmark"
/dev stage="most natial day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from p12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # X1930-02; Invitrogen, Carlabad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 23721), Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             kacharb@nidcd.nih.gov
primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="gi06c09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 19-JUN-2002
```

RESULT 9 BB611549 LOCUS

BB611549

969

đđ

linear

EST

밁 Ś 밁 Ş 밁 8 밁 Ş 밁 Ś 밁 Ś

101 ProThrThrAspIleAspPhePheCysGlu 110

CCAACCACGGATATTGACTTCTTCTGTGAA 396

247

81

```
US-10-019-455A-26 (1-110) x BQ563768 (1-684)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                               187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                                                                                                          61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                         GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATTGGAATTGTAGGT 306
TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 3 6 6
                                                                           TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            194 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           resistrance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."

120 c 178 g 192 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7.06e-73
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
```

ORIGIN

BASE COUNT

Query Match:

Score:

Pred. No.:

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh
,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. . 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Arakawa, T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hiramoto, K., Hori, F., Ishii, Y., Ito, M., Kawai, J., Konno, H., Kouda, M., Koya, S., Matsuyama, T., M.yazaki, A., Nomura, K., Ohno, M., Okazaki, Y., Okido, T., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Takeda, Y., Tanaka, T., Toya, T., Muramatsu, M. and Hayashizaki, Y. RIKEN Mouse ESTs (Arakawa, T., et al. 2001) Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Yamanaka, I., Kiyosawa, H., Kondo, S., Saito, T., Shinagawa, A., Aizawa, K., Fukuda, S., Hara, A., Itoh, M., Kawai, J., Shibata, K., Arakawa, T., Ishii, Y. and Haywashizaki, Y.

Mapping of 19032 mouse cDNAs on mouse chromosomes. J. Struct. Func. Genomics 2 pre, L72-L86 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BB611549 RIKEN full-length enriched, 13 days embryo head Mus musculus cDNA clone 3110083012 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   further details
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 696)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB611549.1 GI:15393547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BB611549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara, Y. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Please visit our web site (http://genome.gsc.riken.go.jp) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81-45-503-9222
                  contributed to prepare mouse tissues. 1st strand cDNA was primed with a primer [5' GAGAGAGAGAGGAFCCAAGAGCTCTTTTTTTTTTTTTTTVN 3'], cDNA was
                                                                                                    /note="Site_1: XhoI; Site_2: SstI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
prepared by using trenalose thermo-activated reverse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tissues.
                                                                                                                                                                                                                                                                                                                                      /clone="3110083012"
                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                        lone_lib="RIKEN full-length enriched, 13 days embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 696
                                                                                                                                                                                                                                                                                                                          host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aizawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
BQ565637
                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                source
```

```
US-10-019-455A-26 (1-110) x BB611549 (1-696)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                378 CCAACCACGGATATTGACTTCTTCTGTGAA 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     258 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     474 bp mRNA linear EST 19-JUN-200: gi42g03.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi42g03 5', mRNA sequence.
BQ565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                    Plate: 42 row: g column: 03
Seq primer: M13RP1 reverse primer (ABI).
                                                                                             Email: kacharb@nidcd.nih.gov
                                                                                                                                                                National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                    Structural Cell Biology
                                                                                                                                                                                                                                           Contact: Kachar, B
                                                                                                                                                                                                                                                                                            EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BQ565637.1 GI:21468954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 474)
                                                                                                                                           301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ည
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         was cleaved with XhoI and SstI."
122 c 176 g 194 t
. 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.24e-73
591.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     257
```

/mol_type="mRNA"

organism="Mus musculus"

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-26 (1-110) x BQ565637 (1-474)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ566932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          368 CCAACCACGGATATTGACTTCTTCTGTGAA 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              248 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  128 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188 GATGTCÁAGAAAGGÓCÁGCÁGATCTÁTGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68 CATGGTGTATTTATGGATAAACTTTCTTCTAATAAGTTGTGTGCGGATGAGGAGTGTGTC 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                409 bp mRNA linear EST 19-JUN-200 gi73g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi73g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ566932.1 GI:21470249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus (house mouse)
cervical dislocation followed by decapitation, the bulla was removed and opened in Leibowitz medium. The bony was removed and opened was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit
                                                                                                                                                                     /dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/clone="Grgan: Organ of Corti; Vector: pBluescript; The
/note="Grgan: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="gi73g09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      row: g column: 09
                                                                                                                                                                                                                                                                                                                                                                                          sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _type="mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 19-JUN-2002
```

```
US-10-019-455A-26 (1-110) x BQ566932 (1-409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity:
                                                                                                                                                                                                                                                                                                                                     141 CTATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCAT
                                                                                                                                                                                                                       40 eAspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAl 60
                                                                                                                                                                                                                                                                                                                                                                                                       20 lTyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIl 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTTGATGATGAGGAGTGTGT 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAla-AspGluGluCysVa
                                           aGlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGl 80
TGGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGG
                                                                                                                                                                  CGATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MMIN-RP) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp. respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with Gigapak III Gold and, upon titration on XII Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the concerty6 (TM) plasmid purification kit (Invitrogen, carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGAAAACAGCTATGACC) and 25% strength Bigdye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). Sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing chemistry (Applied Biosystems, Foster City, CB). As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 23% new unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Glgapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus me reverse transcriptase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     565.00
98.18%
98.18%
95.60%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.61e-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                              260
```

뮍

ş

Ş

뭐

Ş 밁 Ś Query Match:

ORIGIN BASE COUNT

No. :

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ565411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 eProThrThrAspIleAspPhePheCys 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        381 CCCAACCACGGCTATTGACTTCTTCTGT 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321 TTATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGAT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80 YTYrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EQ565411 490 bp mRNA linear EST 19-JUN-200: gi37b12.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi37b12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Structural Cell Biology
National Institute of Deafness and other Communication
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 37 row: b column: 12
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ565411.1 GI:21468728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ565411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   karyota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
mmalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
(bases 1 to 490)
/dev Erage="most natial day 5 to 13"
/dev Erage="most natial day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from p8; 18 from p9; 20 from p10;
14 from p12 and 24 from p13, After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker-primer and transcribed using
Moloney murine leukemia virus reverse transcriptase
(MMLV-RT) and 5-methyl dCTP. The second strand was
synthesized with DNA polymerase and RNase H. Complementary
DNA was blunt ended with Pfu DNA polymerase, ligated with
EcoR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone="gi37b12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear EST 19-JUN-2002
```

```
US-10-019-455A-26 (1-110) x BQ565411 (1-490)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                 441 CCAACCACGGATATTGACTTCTTCTGGGAA 470
                                                                                                                                                                                                                                                                                                                                                                                                    101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          321 GGAAAGTTTTGGGCTGGCAGTGTTTATGGGGACCACCAGGATGAAATGGGAATTGTAGGT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141 CATGGGGTATTTATGGATAAACTTTCTTAAAAAATTGTGTGCGGATAAGGAGTGTGTC 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                201 TATACTATTCTCTGGCAAGAGCACAGGAAAATTACAATGCCCCAAACTGTAGGTTCATC 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                   BQ567343 604 bp mRNA linear EST 19-JUN-200: gi88d08.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi88d08 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
BQ567343.1 GI:21470660 EST.
                                                                           BQ567343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGTCÁAAAAAGGGCAGCAÁATCTATGTTTACTCCAAGCTGGTAACÁAAAAAACGGAGCT 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCACCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the 5° end of the cDNA clones were generated with the universal M13 reverse primer (CAGGANACACCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is a follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11.50 and 0.1% 51.150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 91 a 77 c 109 g 112 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XII Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, carlsbad, CA) as instructed by the manufacturer. ESTs from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.4e-68
555.00
99.09%
93.64%
93.91%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                      EST 19-JUN-2002
```

Score:

. No.:

ORIGIN

BASE COUNT

Ş

맑 Ş

밁 Ş 밁 Ş 밁

RESULT 13

/ERSION ACCESSION DEFINITION BQ567343

reverse primer (CAGGAAACAGCTATGACC)

25%

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: 88 row: d column: 08
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                              /dev stage="male day 5 to 13"
//dev stage="post natal day 5 to 13"
//clone lib="Mrouse Organ of Corti; Vector: pBluescript; The
//note="Torgan: Organ of Corti; Vector: pBluescript; The
//organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
Gigapack II Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcribed using
Moloney murine leukemia virus reverse transcribed with
EcoR I adapters in the presence of ligase and digested
with Xho I. The cNAA was sequentially size fractionated
over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA)
columns to enrich for cDNA was sequentially size fractionated
over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
and Contech Chroma Spin-1000 (Clontech, Palo Alto, CA)
columns to enrich for cDNA was spackaged with Gigapak
III Gold and, upon titration on XLI Blue MRF, cells, the
resistrance hellower have close stansist Interference

resistrance hellower and the constanted to be 11,100,000
                        resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96 well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96 (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the
the 5' end of universal M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="gi88d08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 604
```

```
US-10-019-455A-26 (1-110) x BQ567343 (1-604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No..
CE I (Lbases 1 to 365)

RS Okazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schombach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Hume, D.A., Ouackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Beisel, K., W., Blake, J.A., Batad, D., Brusic, V., Cothia, C., Corbani, L.E., Cousins, S., Dalla, E., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Gimmond, S., Gustincich, S., Hirokawa, N., Jackson, I.J., Jarvis, E.D., Kanai, A., Kawaji, H., Kawasawa, Y., Kedzierski, R.M., F.A., Maglott, D.R., Maltais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pesole, G., Petrovsky, N., Pillai, R., Pontius, J., Q., Q., D., Ramachandran, S., Ravasi, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C.A., Setou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91 ArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71 AspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuValLysGluGln 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31 AspTyrAsnAlaProAspCysArgPheIleAspValLysLysGlyGlnGlnIleTyrVal 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 LysLysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArgAlaGlnGlu 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY232622 RIKEN full-length enriched, adult inner ear Mus musculus cDNA clone F930026J20 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 AAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BY232622.1 GI:26413732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGCAGCAGCAGATCTATGTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGTGTATACCAGGAGGCCACCAAGGAGATCCCCAACCACGGATATTGACTTCTTCTGTGAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTTGGGCTGGCAGTGTTTATGGT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrSerLysLeuValThrGluAsnGlyAlaGlyGluPheTrpAlaGlySerValTyrGly 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 78 a 108 c 152 g 166 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
100.00%
91.20%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.33e-65
539.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        365 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 10-DEC-2002
```

Ş 뮍

RESULT 14 BY232622

8 Ş Вb Ş 밁 Ş B Ş

REFERENCE

US-10-019-455A-26 (1-110) x BY232622 (1-365)

ORIGIN

SOURCE VERSION

CEYWORDS ACCESSION

```
Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
       Query Match:
                                         Best Local Similarity:
                                                                            Percent Similarity:
                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Computational Analysis of Pull-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ,M., Shimada,K., Sultana,R., Takenaka,Y., Taylor,M.S., Teasdale R.D., Tomita,M., Verardo,R., Wagner,L., Wahlestedt,C., Wang,Y., Watanabe,Y., Wells,C., Wilming,L.G., Wynshaw-Boris,A., Yanagisawa,M., Yang,I., Yuan,Z., Zavolan,M., Zhu,Y., Zimmer,A., Carninci,P., Hayatsu,N., Hirozane-Kishikawa,T., Konno,H., Nakamura,M., Sakazume,N., Sato,K., Shiraki,T., Waki,K., Kawai,J., Aizawa,K., Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander, E.S., Rogers,J., Birney,E. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tissues were provided by Kirk W. Beisel (Boys Town National Research Hospital 555 North 30th Street Omaha, NE 68131 USA) whose assistance we gratefully acknowledge. Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , Murata,M., Nakamura,M., Nomura,K., Numazaki,R., Ohno,M., Sakai,K., Sakazume,N., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami,M., Waki,K., Watahiki,A., Muramatsu,M. and Hayashizaki,Y. Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Alzawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hirozane
,T., Imotani,K., Ishii,Y., Itoh,M., Kawai,J., Konno,H., Miyazaki,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length CDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prepare mouse tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12466851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 420, 563-573 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                  /clone_lib="RIKEN full-length enriched, adult inner ear" 60 c 110 g 98 t
                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="inner ear"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="F930026J20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus"
500.00
98.95%
98.96%
84.60%
                                                                                                                                                 2.12e-60
                                                                                                                                                                                                                                                                                              110 g
                                                                                                          Length:
Matches:
                                      Mismatches:
                                                                        Conservative:
   Indels:
```

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ565179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCC 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        258 GGAGAGTTTGGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         198 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGGGGATGAGGAGTGTGTC 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           485 bp mRNA linear EST 19-JUN-200: gi32a07.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi32a07 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: 32 row: a column: 07
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ565179.1 GI:21468496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAla 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 485)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301-402-1599
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone libs"Mouse Organ of Corti; CDNA pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fastrack kit
(catalog # K159-02; Invitrogen, Carlabad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="gi32a07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _type="mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus.
```

manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcribtase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF; cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was burified from 200 ul of saturated culture with the Concert95 (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CACGAAACAGCTATGACC) and 25% attranter cates and constant of the con strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POPS polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."

BASE COUNT 146 a

ORIGIN

Query Match: DB: Percent Similarity: Best Local Similarity: Score: Pred. No.: Alignment Scores: 6.92e-52
441.00
100.00%
100.00%
74.62% Length: Matches: Conservative: Mismatches: Indels:

US-10-019-455A-26 (1-110) x BQ565179 (1-485)

멍 Ş 밁 Ś Ś 밁 Ş В á 242 GAA 244 110 Glu 110 182 CAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGACTTCTTCTGT 241 122 GGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTTGGTGAAGGAG 181 90 GlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAspPhePheCys 109 70 GlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuValLysGlu 89 62 GTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGGGCTGGCAGTGTTTAT 121 50 ValTyrSerLysLeuValThrGluAsnGlyAlaGlyGluPheTrpAlaGlySerValTyr 69 30 GluAspTyrAsnAlaProAspCysArgPheIleAspValLysLysGlyGlnGlnIleTyr 49 2 GAAGATTACAÁTGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTAT 61

Search completed: December 29, 2003, 22:00:50 Job time : 1140.05 secs

```
Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -MODEL-frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO_spool/US10019455/runat 29122003 160347 230/app_query.fasta_1.1770
-Q=/cgn2 1/USPTO_spool/US10019455/runat 29122003 160347 230/app_query.fasta_1.1770
-DB=N Geneseq 19Jun03 -QFMT=fastap -SUFFIX=rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=blts -STRAT=1 -END=-1 -WATRIX=blosum62 -TRANS=bluman40 :cdi
-LIST=45 -DOCALLGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10019455 @CGN 1 1 0 @runat 29122003 160347 230 -NCPU=6 -CPU=3
-NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -NORLOG
-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xgapop 10.0 , Y
Ygapop 10.0 , Y
Fgapop 6.0 , E
Delop 6.0 , I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N Geneseq_19Jun03:*
1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2552756 segs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December 29, 2003, 16:10:49; Search time 132.647 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                10:
                                                                                                      Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2002.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2003.DAT:*
                                                       /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (without alignments)
2238.558 Million cell updates/sec
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	cript
1	9 1	100.0		2	AAF59080	Mouse MLP nucleoti
2		00.	œ	22	5906	e MLP nucleot
. W	νœ	ō	4. (22	5908	se MLP nucleot
4.10	574		384	2 2	AAF59099	Rat MLP nucleotide
σ,	4		330	22	5907	man MLP nucleot
7	547		œ	22	5906	MLP nucleot
œ	547	•	387	24	758	ding nove
. 6	4	2	N	22	634	growth
10	547	'n	N	24	L9574	n angioger
1 1	547		N	2 2	200	n PROSE73
12	1 4 7	אַנ	O N	4. C	9 (2)	encoding nu
. L	n U #	٠,	o v).V	PMH36343	מיים מיים
15.	547		N V	221	908	leot
16	547		0	22	634	n growth
17	505		0	22	909	t MLP nuc
. L	44	·	. σ	22	909	MLP DUCT
20	262.5	44.4	4 4	2 4	ABL64012	Breast cancer rela
N	61.		330	16	90	uence encoding
22	61.	.4	· Un	16	8	quence encoding
2 6	3 5	• •	nυ) K	2 0	oma imitorco
	61.	44.	in i	23	ABV59229	Human prostate exp
26	59.	ü	u	22	778	binant huma
27	41.	٥.	œ	16	05	ence e
) K	19.	37.1	200) - 	AAQ84055	tied tragm
30	μį	o :	0 8	21	6	encod
31	Ĥ	6.	90	24	573	angioger
32	$\dot{\mathbf{L}}$	6.	8	24	824	19670 c
ω	نز،	6	06	25	796	n PRO19670
	×μ	٠.	2 6) K	2 0	encoaing num
36	μį	36.9	σ ι	25	ACA63455	cDNA encoding huma
	μ	٥.	90	25	843	n cDNA enc
38	-	6.	90	25	9893	human secre
. U	μ,		90	2 2	865	secreted/tr
4.0	ıμ	١,٥	0) N	X 9 8 0 Z	PRO polymuc
4.4	٠,	. 0	0) N	ממט	n PRO polynuc
4.	سز ه	٠.	000	2 1 5	9 60	n chNA encodi
, t	٠,	٠.	9 6	2 6	200	n eko porynu
4 A	212	1	200) L	ABX L 6 8 6 6	Human CDNA encoding
;	1			t		

ALIGNMENTS

FSU	SULT 1 F59080 AAF59080 standard: DNA: 330 BP.
	AAF59080;
	23-APR-2001 (first entry)
	Mouse MLP nucleotide sequence SBQ ID NO:25.
	MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
	Mus musculus.

```
RESULT 2
AAF59068
ID AAF5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                              Ş
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores: Pred. No.:
                                                                                           밁
                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-26 (1-110) x AAF59080 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB59132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 10; Page 98; 111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-159271/16.
P-PSDB; AAB69127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 330 BP; 91 A; 60 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200102564-A1
AAF59068
                              AAF59068 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in the exemplification of the present invention.
                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                  1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nishi K,
                                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                         ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                        TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCCACCAAGGAGATC
                                                                                                                                                                        TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                           GlyGluPheTrpAlaGlySerValTyrClyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                               GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                    AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                     TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                     CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.28e-75
591.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ohkubo
                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ູດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               joint
                                                                                                                                                        300
                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                       60
```

```
밁
                          Ś
                                                             밁
                                                                                    á
                                                                                                                     밁
                                                                                                                                                á
                                                                                                                                                                                 밁
                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                           US-10-019-455A-26 (1-110) x AAF59068 (1-384)
                                                                                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAP59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse MLP nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 384 BP; 98 A; 68 C; 111 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; Page 93; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; AAB69125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inhibitor;
                                                                                                                                                                                                                                                                                                                                                     No . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tanaka
                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                             175
                                                                                                                       115 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                  61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                         41
                                                                                                                                                   21
                                                                                                                                                                                 5
5
                                                                                                                                                                                                    HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                 Nishi K,
 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                             GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                              AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                        TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-0186718
                                                                                                                                                                                                                                                                         591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ogi K,
                                                                                                                                                                                                                                                                                                                                                   5.28e-75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO:10
                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                 Length:
                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mogis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Noguchi Y,
                                                                                                                                                                                                                                                                           384
110
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   joint
```

TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle

```
Ş
                                          B
                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ર્
                                                                                                  US-10-019-455A-26 (1-110) x AAF59084 (1-947)
                                                                                                                                           Query Match:
                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                               The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF5909 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                           Sequence 947 BP; 279 A; 158 C; 221 G; 289 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                               Example 2; Page 100-101; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                          promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                        encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mouse MLP nucleotide sequence SEQ ID NO:30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF59084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF59084 standard; DNA; 947
                                                                                                                                                                                                                                                                     in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                    low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of
                 21
                                             65 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nishi K, Ogi K, Ohkubo S,
TyrThr11eSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPhe11e
                                                             HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99JP-0186718
                                                                                                                                        1.83e-74
591.00
100.00%
100.00%
                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                        Conservative:
                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Noguchi Y,
                                                                                                                             947
110
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                          Joint
                                             124
                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
 Percent Similarity:
                 Score:
                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
```

```
Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
                                                                                         The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                       Sequence 330 BP; 91 A; 62 C;
                                                                                                                                                                                                                                                                                                         Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                 Claim 12; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; AAB69131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rat MLP nucleotide sequence SEQ ID NO:48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF59099 standard; DNA; 330 BP.
                                                                           the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                           2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         365 CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           185 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99JP-0186718.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TIGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ohkubo S, Mogi S,
                                       91 G; 86 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yoshimura
                                                                                                                                                                                                                                                                                                             joint
```

1.15e-72 574.00 99.09%

Length: Matches: Conservative:

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-26 (1-110) x AAF59099 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                    Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                  MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                           Itoh Y,
                                                                                                                                                                                                                                            30-JUN-1999;
                                                                                                                                                                                                                                                                     29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                      Rat MLP nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF59098 standard; DNA; 384
                                                 Claim 13; Page 105-106; 111pp; Japanese.
                                                                                                                                                                             Tanaka H;
                                                                                                                                                                                                                                                                                              11-JAN-2001.
                                                                                                                                                                                                                                                                                                                      WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                         inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59098;
                                                                                                                                                                                                                   (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                    2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 AATGTCAAGAAAGGGCAGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    μ
                                                                                                                                          AAB69130.
                                                                                                                                                                                           Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGCAACTTGGTTAGAGAGCCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                         ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                            99JP-0186718.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96.36%
97.12%
22
                                                                                                                                                                                         Ogi K,
                                                                                                                                                                                           Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO:46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   명
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                         Mogi S,
                                                                                                                                                                                         Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         00 H
                                                                                                                                                                                            Yoshimura
                                                                                       joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
```

The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell

WPI; 2001-159271/16

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ននិនិនិនិនិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-26 (1-110) x AAF59098 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AF$19093 to AAF$9093 and AAB$9122 to AAB$9112 represent sequences used the companied of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 384 BP; 98 A; 72 C; 109 G; 105 T; 0 other;
                                                    Tanaka H;
                                                                                Itoh Y,
                                                                                                                                                                                       30-JUN-1999;
                                                                                                                                                                                                                                            29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                 11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                     WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human MLP nucleotide sequence SEQ ID NO:23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF59079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in the exemplification of the present invention.
                                                                                                                                     (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55 CATGGCATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      μ
                                                                                Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                          99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.42e-72
574.00
99.09%
96.36%
97.12%
                                                                             0gi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             330
                                                                                Ohkubo s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                             Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    384
                                                                             Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       106
                                                                                Yoshimura
                                                                                <u>.</u>~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174
```

```
RESULT 7
AABF99065
ID AAFF
XX AAF
AC AAFE
XX AAF
XX BT
XX AAF
XX WLP,
XX MLP,
XX JOIN
XX ININI
XX ININI
XX PN WO2C
XX PN WO2C
XX
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SXCCCCCCCXSXTTTTXR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-26 (1-110) x AAF59079 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lucal Similarity:
                                                                                                         MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                    Human MLP nucleotide sequence SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69127 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                   AAF59065 standard;
                                                                                             inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 330 BP; 91 A; 60 C; 91 G; 88 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 8; Page 97; lllpp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; AAB69126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                              ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                               ds.
                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.35e-69
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                   DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                            330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330
99
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
```

WO200102564-A1

26-FEB-2002 AAS17583; AAS17583 standard; cDNA; 387

Homo sapiens.

```
RESULT 8
AAS17583
                                               밁
                                                                         Ş
                                                                                                             밁
                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                      S
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-26 (1-110) x AAF59065 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 384 BP; 99 A; 70 C; 106 G; 109 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Page 91; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; AAB69123.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-2000; 2000WO-JP04278
                                               355
                                                                             101
                                                                                                             295
                                                                                                                                                                          235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-159271/16.
                                                                                                                                           81
                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                    ບາ
ເກ
                                                                                                                                                                                                                                                                                                                                                                                    1 HisGlyValPheMetAspLysLeuSerSerLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ξ
                                                                                                                                                                                                                                                            AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                  CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 114
                                                                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                           TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                      GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nishi K,
                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                       AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                     TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.03e-68
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               384
799
004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yoshimura K;
                                                                                                                                                                                                                                                                                                     174
                                                                                                                                                                                                                                     234
```

```
밁
                                        Ş
                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                          US-10-019-455A-26 (1-110) x AAS17583 (1-387)
                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                   Local Similarity:
                                                                                                                                                                                                                                                                                                                             treat diseases, abnormalities and disorders caused by abnormal expression, production, function and/or metabolism of the genes, as vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polypuclectides may be used as diagnostic reagents, in chromosome localisation studies,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated novel secreted polypeptide (I) and polynucleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, neurological and psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, or gastrointestinal diseases. These may also be used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease; respiratory disease; renal; gastrointestinal; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 2; Page 44; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-061975/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Agarwal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-APR-2001; 2001WO-US11797.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200179454-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA encoding novel secreted protein #12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (SMIK )
     5
                                                                                                                                                                                                                                                                                               used as diagnostic reagents, in chromosome localisation studie tissue expression studies. The present sequence represents the sequence of novel human secreted protein #12.
                      HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMITHKLINE BEECHAM CORP. SMITHKLINE BEECHAM PLC.
CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inflammatory disorders, infertility, cancer
                                                                                                                                                                                                                                                              BP; 101 A; 70 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-196603P.
2000US-199417P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'product= "Human secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . . 387
                                                                                                               1.04e-68
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rizvi SK,
                                                                                                                                                                                                                                                            106 G; 110 T; 0 other;
                                                                                                           Gaps:
                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                  Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith RF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xiang
114
                                  20
```

```
AAH26341
ID AAH3
XX AAH3
AC AAH3
XX Huma
DE Huma
XX Huma
XX Home
XX Home
XX WO20
XX WO20
XX WO20
XX WO20
XX Home
XX WO20
XX Home
XX WO20
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Home
XX Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; Page 114; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human growth regulatory-like polypeptide clone 16372272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAH26341 standard; cDNA; 426 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0491404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   234
```

flanking the inserts, sequencing by hybridisation sequence signature analysis, and Sanger sequencing techniques. This expressed sequence tag was used in the assembly of a full-length cDNA sequence (see AAHD6343) encoding a novel human growth regulatory-like polypeptide (GRLP, see AAB82671). The GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity protein (CD-RAP, 44% identity and 64% similarity a

amino

acids) and other retinoic

acid-sensitive

The present sequence is that of Hyseq clone identification number 16372272, which was obtained from a human thymus cDNA library using standard PCR with primers specific for vector sequences

```
RESULT 10
ABL95740
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-26 (1-110) x AAH26341 (1-426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-JUL-2000;
25-JUL-2000;
25-JUL-2000;
28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proteins. GRLP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and
                                                                                                                                                                                        Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; gene; ss.
                                                                       09-JUL-2001; 2001WO-US21735.
                                                                                                                                 WO200208284-A2
                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                   Human angiogenesis related cDNA PRO9873 SEQ ID NO:
                                                                                                                                                                                                                                                                                                19-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                       ABL95740 standard; cDNA; 521 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 426 BP; 119 A; 73 C; 113 G; 120 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                 373
                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCACCACGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                    ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
; 2000US-219556P.
; 2000US-220624P.
; 2000US-220664P.
; 2000WO-US20710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.19e-68
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
7
99
0
                                                                                                                                                                                                                                                                   359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              252
```

```
01-DEC-2000; 2000WO-US33578

20-DEC-2000; 2000WG-US33556

20-DEC-2000; 2000WG-US33556

22-JAN-2001; 2001US-0757699

28-FEB-2001; 2001US-0796498

28-FEB-2001; 2001WG-US06666

09-MAR-2001; 2001WG-US06666

09-MAR-2001; 2001US-0802706

11-MAR-2001; 2001US-0802706

12-MAR-2001; 2001US-0808689

22-MAR-2001; 2001US-0816744

05-APR-2001; 2001US-0854208

10-MAY-2001; 2001US-0854280

25-MAY-2001; 2001US-0856034

25-MAY-2001; 2001US-085754
                                                                                                                      One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                   Baker KP, Ferrara N, Ger
Godowski PJ, Gurney AL,
Stephan JF, Watanabe CK,
                                                                                                                                                                      WPI; 2002-171999/22.
P-PSDB; ABB95602.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-SEP-2000;
24-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-AUG-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                         (WATA/)
                                                                                                                                                                                                                                                                                                                                   (GODO/)
                                                                                                                                                                                                                                                                                                                                                                                                  (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-SEP-2000;
                                                                                                                                                                                                                                                                                                     (PANJ/)
                                                                                                                                                                                                                                                                                                              (MARS/)
                                                                                                                                                                                                                                                       PAN J.
PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
                                                                                                                                                                                                                                                                                                             GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                                                                                                                                                                                             FERRARA
GERBER H
                                                                                                                                                                                                                                              M GOOM
                                                                                                                                                                                                                                                                                                                                  GODOWSKI P J.
GURNEY A L.
                                                                                                                                                                                                                                                                                                                                                                                                  GENENTECH
BAKER K P.
                                                                                                                                                                                                                                                                                                                                                                  GERRITSEN M E
                                                                                                                                                                                                                                                                                                                                                        GODDARD A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 2000US-0709238

7 2000WO-US30952

2000WO-US30873

2000WO-US32678

7 2000WO-US32678

7 2000WO-US3496

7 2001US-07609

7 2001US-07669

7 2001US-0766498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-222695P.

2000US-0643657.

2000WG-US23522.

2000WG-US23328.

2000US-230978P.

2000US-00000P.

2000US-0664610.

2000US-0665350.

2000US-242922P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001WO-US17443.
                                                                                                                                                                                                  Gerber H, Gerritsen ME, Godda
L, Hillan KJ, Marsters SA, Pa
CK, Williams PM, Wood WI, Ye
                                                                                                                                                                                                                         Goddard A;
                                                                                                                                                                                                             ŗ
                                                                                                                                                                                                               Paoni NF;
```

hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a coding sequence of the invention.

The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac

Claim 1; Fig 359; 567pp; English.

```
RESULT 11
ABL88251
ID ABL88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-26 (1-110) x ABL95740 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment
  23-JUN-2000;
20-JUL-2000;
25-JUL-2000;
25-JUL-2000;
26-JUL-2000;
02-AUG-2000;
17-AUG-2000;
24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                            Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; pro agonist; pro antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophlebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
                                                                                                                                                                                                                                                                                                                                                                 Human PRO9873 cDNA sequence SEQ ID NO:359.
                                                                                                                                                                                               WO200200690-A2
                                                                                                                                                                                                                                                                                                                                                                                            16-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL88251 standard; cDNA; 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  392 CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
                                                                                                                                                                                                                                                 healing; chromosome mapping; gene mapping; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
2000US-219556P.

2000US-220624P.

2000US-220664P.

2000WO-US20710.

2000US-222695P.

2000US-0643657.

2000WO-US23522.

2000WS-US23528.

2000US-230978P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8P;
                                                                                                                   2000US-213637P.
                                                                                                                                              2001WO-US19692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  167 A; 86 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.57e-68
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521
7
7
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
```

```
08-NOV-2000; 2000W0-US30952.
10-NOV-2000; 2000W0-US30873.
01-DEC-2000; 2000W0-US32678.
20-DEC-2000; 2000W0-US34956.
22-JAN-2001; 2001US-0756498.
28-FEB-2001; 2001US-0756498.
28-FEB-2001; 2001US-0756498.
29-MAR-2001; 2001US-080520.
01-MAR-2001; 2001US-080520.
01-MAR-2001; 2001US-0805889.
10-MAR-2001; 2001US-0805889.
10-MAY-2001; 2001US-08054208.
10-MAY-2001; 2001US-08054208.
10-MAY-2001; 2001US-08054208.
25-MAY-2001; 2001US-0805028.
25-MAY-2001; 2001US-0805028.
25-MAY-2001; 2001US-0805034.
25-MAY-2001; 2001US-0805034.
25-MAY-2001; 2001US-0805034.
25-MAY-2001; 2001US-0805034.
25-MAY-2001; 2001US-0805034.
25-MAY-2001; 2001US-0805034.
25-MAY-2001; 2001US-0805034.
30-MAY-2001; 2001US-0805034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-SEP-2000;
18-SEP-2000;
24-OCT-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                            (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0664610.
2000US-0665350.
2000US-242922P.
2000US-0709238.
```

Baker KP, Ferrara N, Gerber H, Gerritsen ME, Goddard Godowski PJ, Gurney AL, Hillan KJ, Marsters SA, Pan Stephan JF, Watanabe CK, Williams PM, Wood WI, Ye W; Goddard A; ۲,

P-PSDB; ABB84996. WPI; 2002-090516/12.

One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -

Claim 2; Fig 359; 565pp; English.

ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to CC ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, cantiangiogenic, hypotensive, vulnerary and antiarteriosclerotic cativities, and can be used in gene therapy. The PRO polynucleotides, proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal, celler, age-related macular egeneration, atherosclerosis, hypertrension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, carcinoma) and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABL88259 to ABL88267 represent primers and cyrobes used in the exemplification of the present invention.

Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;

```
망
                     S
                                               US-10-019-455A-26 (1-110) x ABL88251 (1-521)
                                                                                     Query Match:
                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                       Score:
                                                                                                                                      Pred. No.:
                                                                                                                                                 Alignment Scores:
92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
            HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                      1.57e-68
547.00
96.36%
90.00%
92.55%
                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                         521
7
99
0
```

Ş

TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle

```
RESULT 12
ABK33571
 뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                        24-AUG-2000;
15-SEP-2000;
10-NOV-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                               25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation; tumour necrosis factor-alpha; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK33571 standard; cDNA; 521 BP
One hundred and twenty two nucleic acids encoding PRO polypeptides.
                        P-PSDB; AAU83627.
                                   WPI; 2002-172001/22
                                                                                                                                                                                                                                                                          25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                      29-JUN-2001; 2001WO-US21066
                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA encoding human PRO protein, Seq ID No 71.
                                                                                                                                                                                                                                                                                        25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                            20-JUL-2000; 2000US-219556P
                                                                                              (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                          JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                          Desnoyers L,
C, Gurney AL,
                                                                                                                                                     2000US-220624P.
2000US-220638P.
2000US-220666P.
2000US-220893P.
2000WO-US20712.
2000WO-US20712.
2000WO-US2332P.
2000WO-US33522.
2000WO-US33673.
2000US-253646P.
2000WS-US3446P.
2000WS-US3446P.
2000WO-US3446P.
2000WO-US3446P.
                                                                                                                    2001WO-US06520.
2001US-0854280.
2001WO-US17092.
                                                                                                                                                                                                                                                                                                                         2000US-220607P
                                                                                                                                                                                                                                                                                                                                       2000US-220605P
                                                                                                                                                                                                                                                                                                                                                  2000US-220585P
                                                        Gerritsen ME,
Smith V, Ste
                                                          ME, Goddard A, Godowski I
Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                       Godowski PJ;
                                                          Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              211
```

```
The invention relates to one hundred and twenty two nucleic acids commoding PRO polypeptides. The sequences of the 122 PRO polynucleotides commode human secreted proteins. The PRO nucleic acids, polypeptides, commode human secreted proteins. The PRO nucleic acids, polypeptides, commoder, breast number of treating a PRO related disorder. The PRO polypeptides are useful for diagnosing tumours, especially lung cancer, breast tumour, prostate tumour, rectal tumour or commoderer, breast tumour, prostate tumour, rectal tumour or commoderer, breast number of the proliferation of, or gene expression, in pericyte cells, for stimulating the proliferation of chomdrovyte cells, for stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal composition of markers and for tissue typing. The PRO nucleic acids have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABK33536-ABK33657 represent human cross of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 2; Figure 71; 359pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumour or liver tumour -
```

Alignment Scores: No.: Length: Matches:

Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;

104

Percent Similarity: Best Local Similarity: Query Match: 1.57e-68 547.00 96.36% 90.00% 92.55% Mismatches: Indels: Conservative: 521 99 7 0

US-10-019-455A-26 (1-110) x ABK33571 (1-521)

밁 Ś В Ś 밁 Ś В Ś 밁 Ś . 많 Ś 212 101 ProThrThrAspIleAspPhePheCysGlu 110 272 152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 81 TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100 61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80 41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT CCCACCACGATATTGACTTCTTCTGCGAG TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 40 271 60

AAH98228 standard; cDNA; 891 BP

дан98228;

12-OCT-2001 (first entry)

Human EST-derived coding sequence SEQ ID NO: 85.

1X6X6X6X6X6X6X6 tomato; monkey; dog; sea urchin; expressed sequence tag; ES diagnostics; forensic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition; ss. Human; sheep; pig; cow; fruit fly; yeast; hamster; macaque; horse;

```
밁
                                                                                  Ş
                                                                                                                  В
                                                                                                                                        Ś
                                                                                                                                                                        밁
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-26 (1-110) x AAH98228 (1-891)
                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-JAN-2000;
17-JUL-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention provides the protein and coding sequences of novel proteins from a variety of organisms, including human, dog, cat, horse, cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (ESTs) from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess biodiversity and for nutritional purposes. The present sequence is a cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     М
О.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 891 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 236; 1275pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated polypeptide for treatment of diseases, diagnostics, raising antibodies and research use -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-JAN-2001; 2001WO-US02687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200154477-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the invention
                      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                   133
                                                                                                                                                                     193 AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-476164/51.
                                                                                                                              61 GlyGluPheTrpAlaGlySerVaiTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                       41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                          73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Liu C, Zl
Drmanac RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAM23569
                                                                            TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                          GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 312
                                                                                                                                                                                                                             TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                  TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                      CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                            HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; 2000US-0491404.
; 2000US-0617746.
; 2000US-0631451.
; 2000US-0663870.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            272 A; 146 C; 214 G; 259 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhou P,
WA, Zhang
                                                                                                                                                                                                                                                                                                                                                                         3.28e-68
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qian XB,
JJ, Werhn
                                                    CAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Werhman
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wang Z,
402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen R,
                                                                                                                                                                                                                                                                                                                                                                            891
99
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Asundi V;
                                                                                                                                        80
                                                                                                                                                                     252
                                                                                                                                                                                                                              192
```

RESULT 14

US-10-019-455A-26 (1-110) x AAH26342 (1-891)

Percent Similarity: Best Local Similarity:

3.28e-68 547.00 96.36% 90.00% 92.55%

Length: Matches: Conservative:

Score:

Alignment Scores:

Sequence 891 BP; 272 A; 146 C; 214 G; 259 T; 0 other;

No.

Query Match:

```
or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polymucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as gliomas. The polymucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                                                                                                          The present sequence is that of a novel nucleic acid that was assembled from human thymus cDNA library-derived Hyseg clone identification number 16372272 (see AAH26341). A recursive algorithm was used to extend the clone by pulling additional sequences from different databases. A full-length sequence (see AAH26343) encoding novel human growth regulatory-like polypeptide (GRLP, see AAB82671) was subsequently as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein grecursor (64% similarity and 45% identity over 111 amino acids)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 115; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, and nervous system hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human growth regulatory-like polypeptide partial cDNA clone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAH26342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH26342 standard; cDNA; 891 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang YT,
                                                     ribozyme and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
```

```
RESULT 15
AAF59083
ID AAF59083
XX AAF59
XX AAF59
XX AAF59
XX MIP;
XX MIP;
KW Joint
KW Cardil
KW Cardil
KW Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX Cardil
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                              The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                 Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human MLP nucleotide sequence SEQ ID NO:29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF59083 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-APR-2001
                                                                                                                                                                                                                                                                                                                Example 1; Page 99-100; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĠĠĀĠĀĀTTĪTĪĠĠĠĊŢĠĠĊĀĠŢĠŤŢĀŢĠĠŢĠĀŢĠĠĊĀĠĀĊĠĀĠĀŢĠĠĠĀGŢĊĠŢĠĠĠŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ທ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                          joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           192
```

Sequence 923 BP; 303 A; 147 C; 213 G;

260 T; 0 other;

```
US-10-019-455A-26 (1-110) x AAF59083 (1-923)
                                                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                   밁
                                                                                                                                                                       Ş
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                    S
                                                밁
                                                                   S
                                                                                                밁
                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                     148 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
388
                        101
                                                  328
                                                                                                  268 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                   208 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                      88 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                          81
                                                                                                                            61
                                                                                                                                                                             41
                                                                                                                                                                                                                              21
                                                                                                                                                                                                                   TyrThrileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                      | HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                   ProThrThrAspIleAspPhePheCysGlu 110
                                           TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                       TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                  GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
 CCCÁCCÁCGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                    3.45e-68
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                    Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                     923
7 99
0
                                                      387
                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                             147
                                                                                                                                                          267
                                                                                                                                                                                   60
                                                                                                                                                                                                           207
                                                                                                        327
```

Search completed: December 29, 2003, 16:41:11 Job time : 133.647 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -MODEL-frame+ D2n.model -DEV=xlh
-Q=/cgn2 1/USPTO spool/US10019455/runat 29122003 160349 366/app_query.fasta_1.1770
-Q=/cgn2 1/USPTO spool/US10019455/runat 29122003 160349 366/app_query.fasta_1.1770
-DB=Published_App_lications_NA -QFWT=fastap -SUFFIX=rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS-bits -START=1 -END=-1 -MATRIX=blosun62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100
-THR_M:N=0 -ALIGN=15 -WODE=LOCAL -OUTFWT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEM=2000000000 -USER-US10019455 @CGN 1 1 412 @runat 29122003 160349 366
-NACHEM=2000000000 -USER-US10019455 @CGN 1 1 412 @runat 29122003 160349 366
-NCPU=6 -ICPU=3 NO_MMAP -LARGEQUERY -NEG SCORES=0 -MAIT -DSPBLOCK_100 -LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  Score
Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapop 10.0 , y
Ygapop 10.0 , y
Fgapop 6.0 , E
Delop 6.0 , I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-26
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   December 29, 2003, 19:57:30; Search time 246.807 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published_Applications_NA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2244575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 segs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xgapext
Ygapext
Fgapext
Delext
  ij
                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . . . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (without alignments)
1527.048 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4489150
Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-216-038-1
```

```
US-10-219-063-71
US-10-219-066-71
US-10-219-068-71
US-10-219-069-71
US-10-219-073-71
US-10-219-480-71
US-10-219-525-71
US-10-219-530-71
US-10-219-531-71
US-10-219-531-71
US-10-219-531-71
US-10-219-531-71
US-10-219-531-71
US-10-223-081-359
US-10-230-437-71
US-10-230-437-71
US-10-230-437-71
US-10-230-437-71
US-10-230-437-71
US-10-230-437-71
US-10-230-437-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-434-71
US-10-230-436-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-233-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
US-10-230-230-33-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-216-038-1
US-10-216-163-71
US-10-218-765-71
                                              Sequence
Sequence
                                                                                           Sequence
Sequence
                                                                                                                 Sequence
Sequence
                                                                                                                                        Sequence
Sequence
                                                                                                                                                              Sequence
Sequence
                                                                                                                                                                                     Sequence
Sequence
                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                               Sequence
Sequence
                                                                                                                                                                                                                                                                                                     Sequence
Sequence
                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
 Sequence
                       Sequence
                                  Sequence
                                                                    Sequence
                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
71. Appl
```

ALIGNMENTS

```
Sequence 1, Application US/10216038
Publication No. US20030124573A1
GENERAL INFORMATION:
APPLICANT: Mize, Nancy K
APPLICANT: Mize, Nancy K
APPLICANT: Boyle, Bryan J
APPLICANT: Ford, John E
APPLICANT: Ford, John E
APPLICANT: Tang, Y Tom
APPLICANT: Liu, Chenghua
APPLICANT: Liu, Chenghua
APPLICANT: Song, Yong
APPLICANT: Sjasstad, Michael
APPLICANT: Sjasstad, Michael
TITLE OF INVENTION: Polypeptides and Materials Relating to No. US20030124573A1el Growth
TITLE OF INVENTION: Polypeptides and Polynucleotides
FURENT APPLICATION NUMBER: US/10/216,038
CURRENT APPLICATION NUMBER: US/09/563,786
PRIOR APPLICATION NUMBER: US 09/563,786
PRIOR APPLICATION NUMBER: US 09/491,404
PRIOR FILING DATE: 2000-05-02
PRIOR FILING DATE: 2000-01-25
NUMBER OF SEQ ID NOS: 8
```

```
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PlC3
CURRENT APPLICATION NUMBER: US/10/216,163
CURRENT FILING DATE: 2002-08-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; FEATURE: misc feature LOCATION: (426)...(426) COTHER INFORMATION: n = A, US-10-216-038-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-26 (1-110) x US-10-216-038-1 (1-426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 71, Application US/10216163
Publication No. US20030149239A1
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Baker,
APPLICANT: Desnoy
APPLICANT: Gerrit
APPLICANT: Goddar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              313 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  193 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73 CATGGAATATTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCACCACGGATATTGACTTCTTCTGCGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.11e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ဝူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   426
99
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  252
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-26 (1-110) x US-10-216-163-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                  US-10-218-765-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-27
                                                                APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
APPLICANT: Grimaldi, J. Ch
APPLICANT: Grimaldi, J. Ch
APPLICANT: Gurney, Austin J
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
APPLICANT: Smith, Jean-Pl
APPLICANT: Watanabe, Colin
                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 71
LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                            Sequence 71, Application US/10218765
Publication No. US20030187201A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                         Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Goddowski, Paul J
Grimaldi, J Christopher
Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F.
Watanabe, Colin L.
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
```

יי או או או או או או או או או או או או או	
PRIOR PRIOR	PRIOD PRIOD
゚゚゚゚ヹ゚゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙ヹ゙	######################################
R FILLING DATE: 1998-03-25 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-03-26 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-04-15 R FILLING DATE: 1998-04-15 R FILLING DATE: 1998-04-15 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-05-06 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-05-06 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-05-15 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-05-16 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-05-16 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-06-17 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-06-17 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-06-17 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-06-17 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-06-16 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-06-26 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-06-26 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-04 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-04 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-04 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-04 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0 R FILLING DATE: 1998-08-05 R APPLICATION NUMBER: 60/0	REFERENCE: P3 NT APPLICATIO NT FILING DATE APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION
	FERENCE: P. APPLICATION FILING DATE PELICATION ILING DATE PELICATION ILING DATE PELICATION ILING DATE PELICATION ILING DATE PELICATION DATE PE
	CE: P3: ICATION NG DATION ATION: ATION: DATE: DATE: DATE: ATION: DATE: D
	TOTOLE P35
1998-03-2 1998-03-2 1998-03-2 1998-03-2 1998-04-1 1998-04-1 1998-05-2 1998-05-2 1998-05-2 1998-06-1 1998-06-2 1998-08-2 1998	:: P3530P1C19 :: P3530P1C19 :: DATE: 2002-08 ITON NUMBER: 10/ ATE: 2002-04-09 ITON NUMBER: 60/ ATE: 1997-09-17 ITON NUMBER: 60/ ATE: 1997-10-18 ITON NUMBER: 60/ ATE: 1997-10-28 ITON NUMBER: 60/ ATE: 1997-10-31 ITON NUMBER: 60/ ATE: 1997-10-31 ITON NUMBER: 60/ ATE: 1997-10-31 ITON NUMBER: 60/ ATE: 1997-10-31 ITON NUMBER: 60/ ATE: 1997-10-31
	30plCl:
	CC19 1002-08
10/09/10/10/10/10/10/10/10/10/10/10/10/10/10/	US/ 08-1 09/11 09/05 0/05 0/06 0/06 0/06 0/06 0/06 0/06 0
1079656 1079656 1079658 107961819 1081919 1082804 108579 108579 108579 1096532	US/10/218, 08-12 0/119,480 0/059113 17 0/062287 17 17 0/063549 0/064103 31 0/064103 31 0/069873 0/078910 20/079294
803 803 803 803 803 803 803 803 803 803	/21 /21 480 13 13 13 87 87 69 10
	8,7
	765
	No. 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,
PRI PRI	PRI : PRI :
PRIOR PRIOR	PRIOR PRIOR
PRIOR APP PRIOR APP	PRIOR API PRIOR FII PRIOR FII PRIOR FII PRIOR FII PRIOR FII PRIOR FII PRIOR FII PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API PRIOR API
APPLIANA APP	PRIOR APPLIC PRIOR PILING
APPLIANA APP	PRIOR APPLICAT PRIOR FILING D PRIOR FILING D PRIOR FILING D PRIOR FILING D PRIOR FILING D PRIOR FILING D PRIOR FILING D PRIOR APPLICAT PRIOR FILING D PRIOR APPLICAT PRIOR FILING D PRIOR APPLICAT PRIOR APPLICAT PRIOR APPLICAT PRIOR FILING D PRIOR APPLICAT PRIOR FILING D PRIOR FILING D PRIOR FILING D PRIOR FILING D
APPLIANA APP	PRIOR APPLICATION PRIOR FILING DATE PRIOR FILING DATE PRIOR FILING DATE PRIOR FILING DATE PRIOR FILING DATE PRIOR APPLICATION PRIOR FILING DATE PRIOR FILING DATE PRIOR APPLICATION PRIOR FILING DATE PRIOR FILING DATE PRIOR FILING DATE PRIOR APPLICATION PRIOR APPLICATION PRIOR APPLICATION PRIOR APPLICATION PRIOR APPLICATION PRIOR FILING DATE PRIOR FILING DATE PRIOR FILING DATE PRIOR FILING DATE PRIOR FILING DATE
APPLIANA APP	PRIOR APPLICATION NU PRIOR APPLICATION NU PRIOR FILING DATE: 1 PRIOR FILING DATE: 1 PRIOR FILING DATE: 1 PRIOR APPLICATION NU PRIOR FILING DATE: 1 PRIOR APPLICATION NU PRIOR FILING DATE: 1 PRIOR FILING DATE: 1 PRIOR FILING DATE: 1 PRIOR APPLICATION NU PRIOR FILING DATE: 1 PRIOR APPLICATION NU PRIOR FILING DATE: 1 PRIOR FILING DATE: 1 PRIOR FILING DATE: 1 PRIOR FILING DATE: 1 PRIOR FILING DATE: 1
APPLIANA APP	PRIOR APPLICATION NUMBE PRIOR FILING DATE: 1996 PRIOR PRILING DATE: 1996 PRIOR PRILING DATE: 1996 PRIOR PRILING DATE: 1996 PRIOR PRILING DATE: 1996 PRIOR APPLICATION NUMBE PRIOR FILING DATE: 1998 PRIOR FILING DATE: 1998 PRIOR FILING DATE: 1998 PRIOR FILING DATE: 1998 PRIOR FILING DATE: 1998 PRIOR APPLICATION NUMBE PRIOR APPLICATION NUMBE PRIOR APPLICATION NUMBE PRIOR APPLICATION NUMBE PRIOR APPLICATION NUMBE PRIOR APPLICATION NUMBE PRIOR APPLICATION NUMBE PRIOR APPLICATION NUMBE PRIOR PRICATION NUMBE PRIOR PRILING DATE: 1998
APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1999-0	APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER:
APPLICATION NUMBER: 60/ APPLICATION NUMBER: 60/ APPLICATION NUMBER: 60/ APPLICATION NUMBER: 60/ APPLICATION NUMBER: 60/ FILING DATE: 1998-09-24 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-24 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-24 APPLICATION NUMBER: 60/ FILING DATE: 1998-10-25 APPLICATION NUMBER: 60/ FILING DATE: 1998-10-25 APPLICATION NUMBER: 60/ FILING DATE: 1998-10-25 APPLICATION NUMBER: 60/ FILING DATE: 1998-10-36 APPLICATION NUMBER: 60/ FILING DATE: 1998-11-03 APPLICATION NUMBER: 60/ FILING DATE: 1998-11-17 APPLICATION NUMBER: 60/ FILING DATE: 1998-11-17 APPLICATION NUMBER: 60/ FILING DATE: 1998-11-18 APPLICATION NUMBER: 60/ FILING DATE: 1998-12-25 APPLICATION NUMBER: 60/ FILING DATE: 1998-12-23 APPLICATION NUMBER: 60/ FILING DATE: 1998-12-23 APPLICATION NUMBER: 60/ FILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ FILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ FILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ FILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ FILING DATE: 1999-03-19	APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER:
PILING DATE: 1998-09-23 APPLICATION NUMBER: 60/ PILING DATE: 1998-09-23 APPLICATION NUMBER: 60/ PILING DATE: 1998-09-24 APPLICATION NUMBER: 60/ PILING DATE: 1998-09-24 APPLICATION NUMBER: 60/ PILING DATE: 1998-09-24 APPLICATION NUMBER: 60/ PILING DATE: 1998-09-24 APPLICATION NUMBER: 60/ PILING DATE: 1998-10-29 APPLICATION NUMBER: 60/ PILING DATE: 1998-10-29 APPLICATION NUMBER: 60/ PILING DATE: 1998-10-30 APPLICATION NUMBER: 60/ PILING DATE: 1998-11-03 APPLICATION NUMBER: 60/ PILING DATE: 1998-11-17 APPLICATION NUMBER: 60/ PILING DATE: 1998-11-17 APPLICATION NUMBER: 60/ PILING DATE: 1998-11-18 APPLICATION NUMBER: 60/ PILING DATE: 1998-11-15 APPLICATION NUMBER: 60/ PILING DATE: 1998-12-23 APPLICATION NUMBER: 60/ PILING DATE: 1998-12-23 APPLICATION NUMBER: 60/ PILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ PILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ PILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ PILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ PILING DATE: 1999-01-12 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-19 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29 APPLICATION NUMBER: 60/ PILING DATE: 1999-03-29	APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: FILING DATE: 1998-0: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER:
PRIOR APPLICATION NUMBER: 60/101746 PRIOR APPLICATION NUMBER: 60/101746 PRIOR APPLICATION NUMBER: 60/101741 PRIOR APPLICATION NUMBER: 60/101741 PRIOR APPLICATION NUMBER: 60/101741 PRIOR APPLICATION NUMBER: 60/101741 PRIOR APPLICATION NUMBER: 60/101746 PRIOR APPLICATION NUMBER: 60/101746 PRIOR APPLICATION NUMBER: 60/101746 PRIOR PRILING DATE: 1998-09-44 PRIOR PRILING DATE: 1998-09-44 PRIOR PRILING DATE: 1998-10-38 PRIOR PRILING DATE: 1998-10-38 PRIOR PRILING DATE: 1998-10-39 PRIOR APPLICATION NUMBER: 60/106746 PRIOR APPLICATION NUMBER: 60/106746 PRIOR PRILING DATE: 1998-11-73 PRIOR APPLICATION NUMBER: 60/106746 PRIOR PRILING DATE: 1998-11-73 PRIOR APPLICATION NUMBER: 60/108746 PRIOR PRILING DATE: 1998-11-73 PRIOR PRILING DATE: 1998-11-73 PRIOR PRILING DATE: 1998-11-73 PRIOR PRILING DATE: 1998-11-73 PRIOR PRILING DATE: 1998-11-73 PRIOR APPLICATION NUMBER: 60/103649 PRIOR APPLICATION	APPLICATION NUMBER: 60, FILING DATE: 1998-09-10 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11 APPLICATION NUMBER: 60, FILING DATE: 1998-09-11

```
Query Match:
                                                                                                                                         Ş
                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                  გ
                                                                                                                                                                                                                                                                                                                                                                                    뭐
                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-26 (1-110) x US-10-218-765-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OR FILING DATE: 1999-06-22
OR APPLICATION NUMBER: 60/141037
OR APPLICATION NUMBER: 60/144758
OR APPLICATION NUMBER: 60/144758
OR FILING DATE: 1999-07-20
OR APPLICATION NUMBER: 60/145698
OR FILING DATE: 1999-07-28
OR FILING DATE: 1999-07-28
OR FILING DATE: 1999-07-28
OR FILING DATE: 1999-08-03
OR APPLICATION NUMBER: 60/146963
OR APPLICATION NUMBER: 60/149320
OR FILING DATE: 1999-08-07
OR APPLICATION NUMBER: 60/149320
OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/149638
OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/149638
OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/149638
OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/151733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DR FILING DATE: 1999-08-31

DR APPLICATION NUMBER: 60/164418

DR FILING DATE: 1999-11-09

DR APPLICATION NUMBER: 60/166361

DR FILING DATE: 1999-11-16

DR APPLICATION NUMBER: 60/169445

DR APPLICATION NUMBER: 60/169445

DR FILING DATE: 1999-12-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/169495
FILING DATE: 1999-12-07
APPLICATION NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/131445
FILING DATE: 1999-04-28
APPLICATION NUMBER: 60/134287
FILING DATE: 1999-05-14
APPLICATION NUMBER: 60/140650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1999-06-22
APPLICATION NUMBER: 60/140723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/131291
FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/131270 FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1999-04-26
                                               101
                                                                                                                                                                                      272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                     212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                               152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                           81
                                                                                                                                                                                                                           61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                   41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                         21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                       TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                       TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  521
99
7
                                                                                                                                                                                      331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151
                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                 211
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PIC24
CURRENT APPLICATION NUMBER: US/10/219,063
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062387
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR PRIOR DATE: 1997-12-17
    맑
                                               Ś
                                                                                              В
                                                                                                                                  Ś
                                                                                                                                                                               B
                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                US-10-019-455A-26 (1-110) x US-10-219-063-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 71, Application US/10219063; Publication No. US20030187202A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin APPLICANT: Desnoyers, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                       152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                               41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                           92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGAGTGTGTC
                                                                                                                              21 TyrThrileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                 1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                                                                                                                             1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                 Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                           521
7
99
0
    271
                                                                                       211
                                                                                                                                                                             151
```

```
В
                                                                       S
                                                                                                                     US-10-019-455A-26 (1-110) x US-10-219-066-71 (1-521)
                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-066-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
US-10-219-066-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/219,066
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 71, Applica Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: P3530P1C27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/063549 FILING DATE: 1997-10-28 APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                     1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluCluCysVal
                           CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F. Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10219066
No. US20030187203A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wood, William I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1997-12-17
                                                                                                                                                                 1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                             Length:
Matches:
Conservative:
                                                                                                                                                                 Indels:
Gaps:
                                                                                                                                                                                                             Mismatches:
                                                                       20
                                                                                                              ; ORGANISM: Homo Sapien US-10-219-067-71
  Percent Similarity:
                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                      SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 71, Application US/10219067 Publication No. US20030187204A1
                                                                                                                                                                                                                         Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/079294 PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, APPLICANT: Desnoy
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE:
                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: P3530P1C51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                               LENGTH: 521
                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-10-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81 TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheile 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-10-28
1.48e-76
547.00
96.36%
                    Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211
```

```
CURRENT APPLICATION NUMBER: US/10/219,068

CURRENT FILING DATE: 2002-08-13

PRIOR APPLICATION NUMBER: 10/119,480

PRIOR FILING DATE: 2002-04-09

PRIOR FILING DATE: 2997-09-17

PRIOR APPLICATION NUMBER: 60/062287

PRIOR FILING DATE: 1997-10-17

PRIOR APPLICATION NUMBER: 60/063549

PRIOR FILING DATE: 1997-10-31

PRIOR APPLICATION NUMBER: 60/064103

PRIOR FILING DATE: 1997-10-31

PRIOR APPLICATION NUMBER: 60/069873

PRIOR FILING DATE: 1997-12-17

PRIOR APPLICATION NUMBER: 60/078910

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR PILING DATE: 1998-03-25

PRIOR APPLICATION NUMBER: 60/079656

PRIOR FILING DATE: 1998-03-27

Remaining Prior Application data removed - See File Wrapper or PALM.

NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-26 (1-110) x US-10-219-067-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 71, Application US/102 Publication No. US20030187205A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  392 CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90.00%
92.55%
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 71, Application US/102 Publication No. US20030187206A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C40
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 52
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      521
                                                                                                                                                                                                                                                                                                                                                                                                 Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/10219069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
```

```
US-10-019-455A-26 (1-110) x US-10-219-068-71 (1-521)
                                                                                                                                                                                      272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                  212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                 81 TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                  61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                         41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
```

331

271

```
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-26 (1-110) x US-10-219-069-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                      APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul J
APPLICANT: Grimaldi, J. Chr
APPLICANT: Gurney, Austin L
APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Ph
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 71, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 71
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C52
CURRENT APPLICATION NUMBER: US/10/219,073
CURRENT FILLING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392 CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                           Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Goddwski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/10219073
                                                                                                                                                                                                                                                                                                                                                                                                                                         US20030187207A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
```

Sequence 71, Application US/1;
Publication No. US20030187208
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul (

APPLICANT: APPLICANT:

Desnoyers, Luc Gerritsen, Mary Goddard, Audrey Godowski, Paul J. Grimaldi, J. Christopher Gurney, Austin L. Smith, Victoria

US-10-219-475-71

Application US/10219475 US20030187208A1

```
S
                                                                                          밁
                                                                                                                                   ঠ
                                                                                                                                                                                    밁
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                               გ
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: DNA; ORGANISM: Homo Sapien US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-26 (1-110) x US-10-219-073-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
DRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
  392
                                      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                   212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                               152
                                                                                                                                                                                                                                  61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                  41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                          21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                       TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                      GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                     271
```

```
RESULT 11
US-10-219-480-71
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-26 (1-110) x US-10-219-475-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-475-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR PPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR PILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
Sequence 71,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C49
CURRENT APPLICATION NUMBER: US/10/219,475
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                     101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                     392 CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                      332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                           272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                 212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                               41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                                                                                                                                                                                                                                                                                                                                            61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                      TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
Application US/10219480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   400
                                                                                                                                                                                                                                                                                                           331
                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    211
```

```
밁
                                                                                      S
                                                                                                                                      밁
                                                                                                                                                                        δ
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-480-71
                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-26 (1-110) x US-10-219-480-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Publication No. US20030187209A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C38
CURRENT APPLICATION NUMBER: US/10/219,480
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                        152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                           272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                 212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                        61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                             41
                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                          92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
81 TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle
                                                                                                                                                                                                                                                                                                                                                   1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                               AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gurney, Au-
Gurney, Au-
Gurney, Mictoria
Gurney, Au-
Gurney, Mictoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen, Mary
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                               1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                        211
                                                                                                                                                                                                                                                                 40
                                                                                                                                 271
```

```
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR PELING DATE: 1997-12-17
PRIOR FILING DATE: 1998-03-07
PRIOR FILING DATE: 1998-03-09
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR PRIOR FILING DATE: 1998-03-26
PRIOR PRIOR FILING DATE: 1998-03-27
PRIOR PRIOR FILING DATE: 1998-03-26
PRIOR PRIOR FILING DATE: 1998-03-27
PRIOR PRIOR FILING DATE: 1998-03-27
PRIOR PRIOR FILING DATE: 1998-03-27
PRIOR PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR 
                                                                           S
                                                                                                                                             망
                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                       US-10-019-455A-26 (1-110) x US-10-219-483-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: P3530P1C43

CURRENT APPLICATION NUMBER: US/10/219,483

CURRENT FILING DATE: 2002-08-13

PRIOR APPLICATION NUMBER: 10/119,480

PRIOR FILING DATE: 2002-04-09

PRIOR APPLICATION NUMBER: 60/059113

PRIOR FILING DATE: 1997-09-17

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 71, Application US/10219483 Publication No. US20030187210A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                 21 TyrThrileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                   92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGAGTGTGTC 151
                                                                                                                                                                       1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Austin L.
                                                                                                                                                                                                                                                                                                                                  1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                      Score:
                                                                                                                                                                                              Alignment Scores:
                                    Query Match:
                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                             US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILLING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILLING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILLING DATE: 1997-10-17
PRIOR FILLING DATE: 1997-10-17
PRIOR FILLING DATE: 1997-10-28
PRIOR FILLING DATE: 1997-10-31
PRIOR FILLING DATE: 1997-10-31
PRIOR FILLING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 71, Application US/10219525 Publication No. US20030187211A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                      LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81 TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
Gerritsen, Mary
1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                             Length:
Matches:
                                Mismatches:
Indels:
                                                                                                  Conservative:
```

```
CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064973
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-26 (1-110) x US-10-219-525-71 (1-521)
                                                                                                                    PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                             SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 71, Application US/10219526
Publication No. US20030187212A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                          Remaining Prior
NUMBER OF SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE: P3530P1C41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                 FILING DATE: 1997-12-17
APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspValLysLysGlyGlnGlnILeTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HisGlyValPheMetAspLysLeuSerSerLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrThrileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                            or Application data removed ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kevin P.

    See File Wrapper or

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-26 (1-110) x US-10-219-526-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-526-71
                                                               PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Publication No. US20030187213A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 71,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                         FILE REFERENCE: P3530P1C54
CURRENT APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, APPLICANT: Desno
                  PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        392 CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152 TATÁCTATTTCTCTGGCTAGTGCTCAÁGAÁGATTATAÁTGCCCCGGÁCTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HisGlyValPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10219530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
```

밁 Ş 밁 Ş 밁 á 밁 Ş 밁

```
; PRIOR FILING DATE: 1998-03-25
; PRIOR APPLICATION NUMBER: 60/079656
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR FILING DATE: 1998-03-27
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER: 0F SEQ ID NOS: 246
; SEQ ID NO 71
; EXECUTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-530-71
                                                                                                                                 밁
                                                                                                                                                              Ş
                                                                                                                                                                                              밁
Search completed: December 30, 2003, 02:01:06 
 {\tt Job} time : 248.807 secs
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-26 (1-110) x US-10-219-530-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores: Pred. No.:
                                                                                     101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                              272 GGAGAATTTTGGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                              212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                  392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                 332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                   81
                                                                                                                                                                                                                    61 GlyGluPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                     41 AspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                              TyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.48e-76
547.00
96.36%
90.00%
92.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52
4 0 0
1 0 0
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -MODEL=frame+_p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO_spool/US10019455/runat_29122003_160348_277/app_query.fasta_1.1770
-Q=/cgn2 1/USPTO_spool/US10019455/runat_29122003_160348_277/app_query.fasta_1.1770
-DB=Issued_Patencs_NA -QFMT=fastap -SUFFIX=rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=buman40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZES=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10019455_@CNT=pto -NORM=ext -HEAPSIZES=500 -MINLEN=0 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                              194
161.5
91.5
89.5
89.5
                                                                                                                                                                            261.5
261.5
241.5
219.5
                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-26
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               December 29, 2003, 16:24:24; Search time 34.972 Seconds
    40.9
37.1
32.8
27.3
15.5
15.1
15.1
15.1
15.1
15.1
13.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               569978 seqs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HGVFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        // Ggn2_6/ptodata/2/ina/5h_COMB.seq:*
// cgn2_6/ptodata/2/ina/5B_COMB.seq:*
// cgn2_6/ptodata/2/ina/6A_COMB.seq:*
// cgn2_6/ptodata/2/ina/6B_COMB.seq:*
// cgn2_6/ptodata/2/ina/6B_COMB.seq:*
// cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                             Length DB
                                                                305
596
3565
2793
2757
US-08-578-649-1

US-08-578-649-4

US-08-578-649-8

US-08-578-649-24

US-08-578-649-3

US-08-578-649-3

US-07-646-5378-1

US-08-306-691B-48

PCT-US93-06251-79

US-09-300-958A-30

US-09-300-958A-28

US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7.05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (without alignments)
1388.315 Million cell updates/sec
                                  Sequence 18, Appli
Sequence 4, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 24, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 48, Appli
Sequence 79, Appli
Sequence 79, Appli
Sequence 30, Appli
                                                                                                                                                                                                                                                                                         Description
  Sequence
                         Sequence
```

						O					O	G														
44																										
655	ი ი ი	n G	თ თ თ	<u>ი</u> თ			თ თ თ თ	66	66.5	67	67.5	J	:	-	71.5				:	•					77	
	11.0	٠.		:::	٠,	:	11.2	۲.	۲	۲.	-	12.0	2			.2		ν.	٧.				ω.	Ü	13.0	ίω
	8 8 4 6	•	4	44		73	1170 1457	-3	н	34	1593	യ	87	14	14	14	14	9	8	0	9	747	52	52	œ	80
дд,	4.4	<u>ω</u> ω	<u>, , , , , , , , , , , , , , , , , , , </u>		φ.	4.	4. ω	4	44	4	4.	4.	4	<u>, , , , , , , , , , , , , , , , , , , </u>	<u>, -</u>	_	_	_	_	_	_	4	۳		<u>, , , , , , , , , , , , , , , , , , , </u>	_
-08-434-255-5 -08-459-967-5	202	-09-024-532-1	-08-460-32 -08-459-87	-08-434-255	-09-252-991A	-09-252-991A-1423	9-252-9	-08-630-915A	-09-076-259-1	8-630-915A-2	9-252-991A	US-08-916-421B-1	8-630-915A-1	8-583-799-7	8-583-799-6	64-839-7	-08-164-839-6	-583-799-3	-08-583-799-3	-08-164-839-3	8-164-839-3	-08-630-915A-	S-08-583-799-	-08-164-839-	-08-583-7	8-164-83
equen equen	nce 1, Appl	equence 1, Appl	nce 7, Appl nce 7, Appl	equence 7, Applequence 7, Appl	equence 14025,	equence 14239,	- 5	e 197, Ap	equence 1, Appl	quence 29, App	equence 5394, Ā	Sequence 1,	equence 193, Ap	e 71, App	equence 69,	equence 71, App	equence 69, App	equence 32, App	quence 30,	equence 32, App	ence 30, App	псе 39, Арр	nce 5,	e 5, Appl	æ	, Appl

ALIGNMENTS

RESULT 1

```
US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No. 5770366
GENERAL INFORMATION:
        CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PF
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18,
                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
COMPUTER: IFM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                            APPLICATION NUMBER: US/08 FILING DATE: 29-July-1994
TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                          ZIP:
                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                          10022
                                                                                                                                                                                                                                                                                                                                                                                                                               New York
                                                                                                                                                                                                                                                                                                                                                                                                             New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08578649
                                                                                                                                                                                                                                                                                                                                                                                                                                                   805 Third Avenue
(212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Felfe & Lynch
                                                                                                                                                                                                                               US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24
                                                      BOER 1035-PFF/ALT
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-26 (1-110) x US-08-578-649-18 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: 4..6
; OTHER INFORMATION: /function= "Startcodon Met" US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 330 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: cDNA
                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inc
COMPUTER: IBM PS/2
                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                           APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: mat_peptide LOCATION: 7..327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                 COMPUTER: IBM PS/2
OPERATING SYSTEM: |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_RNA
                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     304 GACAAATGGGATTTCTACTGCCAG 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 GGCCAAGTGGTGTATGTCTTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTC 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               244 CCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64 TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25 LeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLys 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83 ProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45 GlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGlu---Phe 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73 AIGGCIGIGGCCCITCAGGACTACAIGGCCCCGACTGCCGATTCCIGACCATTCACCGG 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13 ATGCCAAAATTAGCAGATCGTAAATTATGTGCAGATCAGGAGTGCAGCCACCCTATCTCC 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer 24
                                                                                                                    10022
                                                                                                                                                                                New York
                                                                                                                                       New York
Y: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThraspIleAspPhePheCysGlu 110
                                                                                                                                                                                                 805 Third Avenue
                                                                                                                                                                                                                                                                                                                                            Ulrich Bogdan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261.50
67.598
45.378
44.258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.99e-30
                                                                            inch 1.44 Mb storage diskette
                                         PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
```

```
; Sequence 4, Application US/08578649
; Patent No. 5770366
; GENERAL INFORMATION:
                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                   US-08-578-649-4
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-26 (1-110) x US-08-578-649-1 (1-459)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247...
PILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTOKNOLIO.

ARME: Andrew L. Tiajolol.

RAME: Andrew L. Tiajolol.

REGISTRATION NUMBER: 31,575

REFERENCE/DOCKET NUMBER: BOER
TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION 10F0RMATION:

TELECOMMUNICATION 10F0RMATION:

TELECOMMUNICATION 10F0RMATION:

TELECOMMUNICATION 10F0RMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 459 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 ATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCACCCTATCTCC 177
                                                                                                                                                                         103 ThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                         289 TGGGGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGCTATTTC 348
                                                                                                                                 409 GACAAATGGGÁTTTCTACTGCCAG 432
                                                                                                                                                                                                                                                                                                                                                                                              238 GGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25 LeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLys 44
                                                                                                                                                                                                                                                            83 ProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 102
                                                                                                                                                                                                                                                                                                                                                 64 TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                    45 GlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGlu---Phe 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer 24
                                                                                                                                                                                                                    CCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mat_peptide
112..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40..111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SdS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.28e-29
261.50
67.59%
45.37%
44.25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
```

APPLICANT:

Ulrich Bogdan Reinhard Buttner Brigitte Kaluza

APPLICANT:

```
US-10-019-455A-26 (1-110) x US-08-578-649-4 (1-581)
                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-578-649-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: DE P 43 24 247.2 FILING DATE: 20-July-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 29-July-1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Wordperfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                             356 TGGGGAGGCAGTGTTCAGGGAGGTTACTATGGAGACCTGGCAGCCCGCCTGGGCTATTTC 415
                                                                                                  305 GGCCAAGTGGTGTATGTCTTCTCCAAGTTG-----AAGGGCCGTGGGCGCCTTTTC 355
                                                                                                                                                                   185 ATGCCCAAGCTGGCTGACTGGAAGCTGTGTGCGGACGAAGGAATGCAGCCATCCTATCTCC 244
83 ProSerAsnLeuValLysGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 102
                                                               64 TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 82
                                                                                                                                  45 GlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGlu---Phe 63
                                                                                                                                                                                          25 LeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLys 44
                                                                                                                                                                                                                                                        5 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 581 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Felfe & Lynch
805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mat_peptide
179..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    110..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                         1.62e-26
241.50
64.81%
45.37%
40.86%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                           Ş
                                                               밁
                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
```

В Ş В Ş

Ş В

В Ş

```
US-10-019-455A-26 (1-110) x US-08-578-649-8 (1-305)
                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                 US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 8, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:

APPLICANT: Ulrich Bogdan

APPLICANT: Reinhard Buttner

APPLICANT: Brigitte Kaluza

TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: DE P 43 24 247.2 FILING DATE: 20-July-1993 ATTORNEY/AGENT INFORMATION: NAME: Andrew L. Tiajoloff
                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/KEY: misc_RNA
LOCATION: join(1..29, 277..305)
OTHER INFORMATION: /function="Primer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 29-July-
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                            NO. :
                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (212) 838-3884
THEREAX: (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM:
SOFTWARE: Wordper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |||||||::::::|||:::||||
416 CCCAGTAGCATTGTCCGGGAGGACCTGAACTCGAAACTTGGCAAAATTGATATGAAGACC 475
     67
                       32 TyrasnalaProaspCysargPheIleAspValLysGlyGlnGlnIleTyrValTyr 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            476 GATCAATGGGATTTCTACTGCCAG 499
                                                                                                         12 LysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArgAlaGlnGluAsp 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               103 ThraspileaspphePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic acid
                                                                       AAGTTTTCGGCGGATCAGGAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCCTTCAGGAC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New York
TACATGGCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                          219.50
64.65%
44.44%
37.14%
                                                                                                                                                                                                                                                                                        1.16e-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                                                                                  Conservative:
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 24, Application US/08578649
Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (212) 838-388
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                    FEATURE
                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                         LENGTH: 596 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                LOCATION:
                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
SOFTWARE: Wordper
                                                  LOCATION:
                                                                    NAME/KEY:
                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                    LOCATION:
                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                        LOCATION:
                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238 GACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACAGATAAATGGGATTTCTAC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127 TÉCAAGETG-----AAGGGEEGTGGGEGGETETTÉTGGGGAGGÉAGEGTTEAGGGA 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71 AspHisGln---AspGluMetGlyIleValGlyTyrPheProSerAsnLeuValLysGlu 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52 SerLysLeuValThrGluAsnGlyAlaGlyGlu---PheTrpAlaGlySerValTyrGly 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90 GlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAspPhePhe 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Andrew L. Tiajoloff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                  (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ulrich Bogdan
                                                                                                                                                                                                                                            CDS
 393..503
                                                                                                                      exon
                                                                                                                                                    sig_peptide
40..111
                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBM PS/2
                                                  214..347
                                                                  exon
                                                                                                    40..166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Felfe & Lynch
                                                                                                                                                                                                                                                                          DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PC-DOS
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-578-649-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-26 (1-110) x US-08-578-649-24 (1-596)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                         TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
No.:
                                                                                                                                                                                                                                                                             APPLICANT: .Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: one-of(194, 369, 527)
OTHER INFORMATION: /note= "N in positions 194, 369
OTHER INFORMATION: and 527 denotes an indefinite number and sequence
OTHER INFORMATION: of nucleotides "
                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             525 CANTITCCCCTTTCTCTTTTTCAGAAATGGGATTTCTACTGCCAG 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            348 GTGGGTCTTGGGAGAGTGAAANAGCTTTTAACTCCTCTTCCCCAGGTTCAGGGAGATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCG-TAAGAATGG 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  468 ACCCTGAAACCTGGCAAAGTCGATGTG---AAGACAGACGTGGAGTGTCATGGGGGGCTGG 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     408 TATGGAGATCTGGCTGCTCGCCTGGGCTATTTCCCCCAGTAGCATTGTCCGAGAGGACCAG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297 TATGTCTTCTAAGCTG------AAGGGCCGTGGGCGCTCTTCTGGGGAGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   237 CTTCAGGÀCTACATGGCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTG 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29 GlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLysGlyGlnGlnIle 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92 ValTyrGlnGluAlaThrLysGluIleProThrThrAspIle------ 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73 GlnAspGluMetGlyIle---ValGlyTyrPheProSerAsnLeuValLysGluGlnArg 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  68 ------ValTyrGlyAspHis 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49 TyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGlu---PheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10022
                                                                                                                                                 : 805 Third Avenue
New York
                                                                                                                               New York
                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
549..569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.78e-19
194.00
47.74%
32.26%
32.83%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----ThrileSerLeuAlaArgAla 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -AspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            407
```

```
Ď,
                                                                            Ş
                                                                                                             B
                                                                                                                                          Ş
                                                                                                                                                                         밁
                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                   US-10-019-455A-26 (1-110) x US-08-578-649-3 (1-3565)
                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              JS-08-578-649-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 33
SEQUENCE CHARACTERISTICS:
LENGTH: 3565 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                             .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 31,575
REFERENCE/FOCKET NUMBER: BOER
TELECOMMUNICATION: INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 20-July-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Mordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: one-of (2216)
OTHER INFORMATION: /no
OTHER INFORMATION: den
OTHER INFORMATION: nuc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Andrew L. Tiajoloff REGISTRATION NUMBER: 31,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
                                             1636 CGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG----- 1686
                                                                                                           1576 CCTTCCCTAGACCCTATCTCCATGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGC 1635
                                                                                                                                                                      1516 GAGGGGTAGAATTGGGCTTGGGTGTAGCCTGTGTGGATGTGCTGCATTCCCCCTTCTATT 1575
                                                                                                                                                                                                                                    1456 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCGTAAGAATGGG 1515
58 AsnGlyAlaGlyGlu---PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMet 76
                                                                           38 ArgPheIleAspValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGlu 57
                                                                                                                                    20 -----ValTyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCys 37
                                                                                                                                                                                                                                                                      u
                                                                                                                                                                                                                                                                   MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCys-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sig_peptide
1378..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3232..3252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2804..2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
1586..1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1378..1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          single
                                                                                                                                                                                                                                                                                                                                                 1.46e-13
161.50
44.80%
35.20%
27.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            denotes an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleotides"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "N in position 2216 denotes an indefinite number ans sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                  12
24
5
                                                                                                                                                                                                                                                                    19
                                                                                         밁
                             밁
                                                         Ş
                                                                                                                     Ş
                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-07-646-537B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                 US-07-646-537B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. 5348864
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                            FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                             HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08543-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Princeton
                                                                                                                                                                                                                                                                                                                                                                                                            linear
```

```
US-10-019-455A-26 (1-110) x US-07-646-537B-1 (1-2793)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/07646537B Patent No. 5348864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (609) 921-4526
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Gaul, Timothy J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: DC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 921-5901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 2793 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Barbacid, Mariano TITLE OF INVENTION: Vav Proto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                 2429 GATATCATC-----AAGATCCTCAATAAGAAGGGACAGCAAGGCTGGTGGCGT 2476
                                                                                                                                      2369 GCCAAAGCCCGCTACGACTTCTGTGCCCGGGACAGGTCGGAACTGTCCCTTAAGGAGGGT 2428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1687 AAGGGCCGTGGGCGCTCTTCTGGGGAGGCAGCGTG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1765 AGACTCATTATCCCC 1779
66 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 85
                                                                                            46 GlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGluPheTrpAla 65
                                                                                                                                                                                 26 AlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLysGly 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97 ThrLysGluIlePro 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77 GlyIleValGlyTyrPheProSerAsnLeuValLysGluGlnArgValTyrGlnGluAla 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2793 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14..2545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bristol-Myers Squibb Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Box 4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          double
                                                                                                                                                                                                                                                                                                52.86%
32.86%
15.48%
                                                                                                                                                                                                                                                                                                                                                                    0.00233
91.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vav Proto-Oncogene Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/07/646,537B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33,111
                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -AGAGTGAAAGAGGGAAGGGTACAGAGCTGGGGT 1764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --CGTCTT 1728
```

```
Ş
                                                                                                                                                                         ş
                                                                                                                                          밁
                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                           US-10-019-455A-26 (1-110) x US-08-306-691B-48 (1-2757)
                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                      JS-08-306-691B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-306-691B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. 5734039
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 48,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: NO. 5734039e
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Monaco, Daniel A. REGISTRATION NUMBER: 30,480 REFERENCE/DOCKET NUMBER: 83: TELECOMMUNICATION INFORMATION: TELEPHONE: (215) 568-8383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Galabretta, Bruno
APPLICANT: Skorski, Tomasz
TITLE OF INVENTION: ANTISENSE
TITLE OF INVENTION: OLIGONUCLEOTIDES TARGETING COOPERATING ONCOGENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Seidel, Gonda, Lavorgna & Monaco, P.C.
                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: September 15, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
     2433 GGGGAGATCTÁTGGCCGG------
                                                                    2385 GACATCATC-----AAGATCCTTAACAAGAAGGGACAGCAAGGCTGGTGGCGA 2432
                                                                                                                                       2325 GCCAAAGCCCGCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAAGGAGGGT 2384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2516 TATGTGGAGGAAGAC----TATTCCGAA 2539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2477 GGGGAGATCTACGGCCGG---
                                66 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 85
                                                                                                    46 GlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGluPheTrpAla 65
                                                                                                                                                                       26 AlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLysGly 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86 LeuValLysGluGlnArgValTyrGlnGlu 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Philadelphia
Pennsylvania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08306691B
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2757 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Two Penn Center, Suite 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Diskette, 3.50 inch, 720 Kb
                                                                                                                                                                                                                                                        0.00451
89.50
52.86%
32.86%
15.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/306,691B
                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -ATCGCTGGTTCCCTTCTAAC 2515
-GTTGGCTGGTTCCCTGCCAAC 2471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                    밁
                                                                                                                                   Ş
                                                                                                                                                                                                      Ś
RESULT 10
                                                                                                                                                                     밁
                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT-US93-06251-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US93-06251-79
                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: DiGiglio, Frank S.
REGISTRATION NUMBER: 31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: PC:
FILING DATE: 19930630
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Garden City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2757 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                                                                                                                                                                                                             89.50
52.86%
32.86%
15.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                   0.00451
```

```
US-10-019-455A-26 (1-110) x PCT-US93-06251-79 (1-2757)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 79, Application PC/TUS9306251
GENERAL INFORMATION:
APPLICANT: Wickstrom, Eric and Rife, Jason P.
TITLE OF INVENTION: Trivalent Synthesis of Oligonucleotides Containing
TITLE OF INVENTION: Stereospecific Alkylphosphonates and Arylphosphonates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 516-742-4343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
2472 TACGTGGAGGAAGAT----TATTCTGAA 2495
                                                                                                                                                                                                                                                       2385 GACATCATC------AGGATCCTTAACAAGAGGGACAGCAAGGCTGGTGGCGA 2432
                                                                                                                                                                                                                                                                                                                                                                                     2325 GCCAAAGCCCGCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAGGAGGGT 2384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2472 TACGTGGAGGAAGAT----TATTCTGAA 2495
                                                            86 LeuValLysGluGlnArgValTyrGlnGlu 95
                                                                                                                                                                                66 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 85
                                                                                                                                                                                                                                                                                                                      46 GlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGluPheTrpAla 65
                                                                                                                                                                                                                                                                                                                                                                                                                                           26 AlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLysGly 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86 LeuValLysGluGlnArgValTyrGlnGlu 95
                                                                                                                                     GGGGAGATCTATGGCCGG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: SCULLY, SCOTT, MURPHY & PRESSER 400 Garden City Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US93/06251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                              -------Gridgergerrecergecake 2471
```

```
APPLICANT: Welsh, John
APPLICANT: Welsh, John
APPLICANT: Welsh, John
APPLICANT: Welsh, John
TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods of
TITLE OF INVENTION: Using Same
FILE REFERENCE: P-PH 3457
CURRENT APPLICATION NUMBER: US/09/300,958A
CURRENT FILING DATE: 1999-04-27
PRIOR APPLICATION NUMBER: 60/083,331
PRIOR APPLICATION NUMBER: 60/083,331
PRIOR APPLICATION NUMBER: 60/083,070
PRIOR APPLICATION NUMBER: 60/088,070
PRIOR FILING DATE: 1998-08-27
PRIOR APPLICATION NUMBER: 60/18,624
PRIOR FILING DATE: 1999-02-04
NUMBER OF SEQ ID NOS: 85
CORMANDE. Defentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-300-958A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-26 (1-110) x US-09-300-958A-30 (1-4762)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-300-958A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-300-958A-30
                                                                                                                                                                                                                                                                                                                                                                                       Sequence 28, Application US/09300958A Patent No. 6495319 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 30, Application US/09300958A Patent No. 6495319
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/300,958A
CURRENT FILING DATE: 1999-04-27
PRIOR APPLICATION NUMBER: 60/083,331
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/98,070
PRIOR FILING DATE: 1998-08-27
PRIOR FILING DATE: 1998-08-27
PRIOR FILING DATE: 1999-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: McClelland, Michael APPLICANT: Welsh, John APPLICANT: Trenkle, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 85
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods of TITLE OF INVENTION: Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2552 CCATCCACATATGTGGAAGAG 2572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2405 CTGGGCATTGCCATCGCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTG 2464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2513 TGGTGGAGAGGAGAAGTAAATGGCAGG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2465 TTGAAAGGAGATGTGGTGAAGATTTACACAAAGATG-----AGTGCAAATGGC 2512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83 ProSerAsnLeuValLysGlu 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGlu 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspVal 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrphe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PH 3457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.00984
89.50
52.24%
32.84%
15.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -GTGGGCTGGTTT 2551
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
 Query Match:
                     Percent Similarity:
Best Local Similarity:
                                                                               Pred. No.:
                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-26 (1-110) x US-09-300-958A-28 (1-467)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                       US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-300-958A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11, Apr
                                                                                                                                                                                            SEQ ID NO 11
LENGTH: 5398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 28
                                                                                                                                                                                                                                          APPLICAM: KUTYAN, John
APPLICAM: KUTYAN, JOHN
TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF USE
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 600-1-228N
CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT FILING DATE: 1999-07-19
EARLIER APPLICATION NUMBER: 60/093,631
EARLIER APPLICATION NUMBER: 60/093,631
EARLIER FILING DATE: 1998-07-21
NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Cole, Philip
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Margarit, S. M. APPLICANT: Bor-Sogi, Dafna
                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Boriack-Sjodin,
                                                                                                                                                       ORGANISM: Saccharomyces cerevisiae
                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (428)
NAME/KEY: unsure
LOCATION: (462)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 467
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: unsure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Мо.
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152 GCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTGTTGAAAGGAGATGTG 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 299 ----GGAAGGAGGATGAATAAATTCAAATCCCGTGTTGCACCCTGCACCAAAATT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       260 GTAAATGGCAGG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88 LysGluGlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspile 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48 IleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGluPheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28 AlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAspValLysLysGlyGlnGln 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09356952
78.50
47.19%
26.97%
13.28%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50.00%
30.77%
13.87%
                                                                             0.498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ann
Indels:
                       Mismatches:
                                     Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       - GTGGGCTGGTTTCCATCCACATATGTG
```

8 LeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArg

B Ş В Ş

밁 S 용 Ś

```
RESULT 13
US-08-164-839-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 3, Application US/08164839
Patent No. 5514573
GENERAL INFORMATION:
                                                                                                                                                                                TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 2085 base pairs
TYPE: nucleic acid
                                                      MOLECULE TYPE: CORIGINAL SOURCE:
ORGANISM: Pagri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: 08/004,729
APPLICATION NUMBER: 08/004,729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 14-JAN-1993
ATTOXENT/AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
LOCATION:
                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/164,839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                 IOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        505 GCTGCTTATGACTTTAATTATCCCCATTAAAAAAAGACAGTTCTTCGCAACTTTTGTCTGTA 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   610 TGGTGGGATGGATTAGTTATTGACGACAGTAATGGGAAAGTTAAC---AGAGGCTGGTTT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      565 CAACAAGGGGAAACCATTTATATACTTAACAAA------AACTCATCTGGG--- 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |||||||||
445 CTTTCTTCCTCCCCTCGACAAGTGAGTTGACCAGCATTCGTCCAATTGGAATAGTAGTC 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     667 CCTCANAACTTCGGTAGACCTTTAAGA 693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43 LysLysGlyGlnGln[]eTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyGlu 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28 AlaGlnGluAspTyrAsnAlaPro-------AspCysArgPheIleAspVal 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83 ProSerAsnLeuValLysGluGlnArg 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Virginia
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOTOKI,
NAGASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAKANISHI, KAZUO
MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MATSUI, HIROSHI
CDS
1..2082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YASUEDA, HISASHI
                                                                                  Pagrus major
                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                                                              cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                     double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KAZUO
                                                                                                                                                                                                                                                                                                                                                                10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    먉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-26 (1-110) x US-08-164-839-3 (1-2085)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-164-839-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-583-799-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCOLE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Applic
Patent No. 5607849
                                                            TELEPHONE: (703)412-300
TELEFAX: (703)413-2220
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                         APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5607849man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-599-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                     SEQUENCE CHARACTERISTICS:
LENGTH: 2085 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IHM PC compatible
COMPUTER: IHM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Х
о.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: MATSUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT ADDRESSEE: P.C.
                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
      TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1339 AAGGAGAGGGAAGTGTACAAGAAGGCCGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1225 -----CGGAAGATCACAGAGGACCATGCTAGTGTGGGGAAGAACATCAGCACAAAAAGC 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1174 GAGGTGAACGCTGACACCATCTACTGGATCGTCCAAAAAAGATGGCCAACGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1279 GTTTACGGCAACCACAGAGAAGATGTCACTCTGCACTACAAATATCCTGAAGGCTCCCAG 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51 TyrSerLysLeuValThrGluAsnGlyAlaGly------GluPheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31 AspTyrAsnAlaProAspCysArgPheileAspValiysLysGlyGlnGlnIleTyrVal 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88 LysGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Virginia
f: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08583799
                     2085 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAKANISHI, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAGASE, KAZUO
MATSUI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52.50%
27.50%
13.03%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.214
                                                                                                                                                                                                                                                                                                                                                                  US/08/583,799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-26 (1-110) x US-08-583-799-3 (1-2085)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-583-799-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-08-164-839-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 5, Application US/08164839 Patent No. 5514573
FILING DATE:
CLASSIFICATION: 435
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: O
                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/164,839
                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                      ZIP:
                                                                                                                                                                                                                                                                                       STATE: Virginia COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                        STREET: 1755 Jet
CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1225 -----CGGAAGATCACAGAGGACCATGCTAGTGTGGGGAAGAACATCAGCACAAAAAGC 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1339 AAGGAGAGGGAAGTGTACAAGAAGGCGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1279 GTTTACGGCAACCACAGAGAGATGTCACTCTGCACTACAATATCCTGAAGGCTCCCAG 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1174 GAGGTGAACGCTGACACCATCTACTGGATCGTCCAAAAAGATGGCCAACGA----- 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31 AspTyrAspAlaProAspCysArgPheIleAspValLysLysGlyGlnGlnIleTyrVal 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              68 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51 TyrSerLysLeuValThrGluAsnGlyAlaGly------GluPheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88 LysGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrTnrAspIle 105
                                                                                                                                                                                                                                                                            22202
                                                                                                                                                                                                                                                                                                                                             B: P.C.
1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAKANISHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAGASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pagrus major
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1..2082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                              OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.214
77.00
52.50%
27.50%
13.03%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2085
22
20
20
28
10
```

```
á
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                    Ś
                                  S
                                                                          밁
                                                                                                              S
                                                                                                                                                      닭
                                                                                                                                                                                                                                                                                                            US-10-019-455A-26 (1-110) x US-08-164-839-5 (1-2520)
                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-164-839-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (703)412-300
TELEFAX: (703)413-2220
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 10-599-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: cDNA to mRNA
ORIGINAL SOURCE:
ORGANISM: Pagrus major
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Мо
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE TYPE: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                      1261 -----CGGAAGATCACAGAGACCATGCTAGTGTGGGGAAGAACATCAGCACAAAAAGC 1314
                                                                                                                                                                                                                                    1210 GAGGTGAACGCTGACACCATCTACTGGATCGTCCAAAAAAGATGGCCAACGA------
                                                                              1315 GTTTACCGCAACCACAGAGAAGATGTCACTCTGCACTACAAATATCCTGAAGGCTCCCAG 1374
1375 AAGGAGAGGGAAGTGTACAAGAAGGCGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1434
                                                                                                          68 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 87
                                                                                                                                                                                          51 TyrSerLysLeuValThrGluAsnGlyAlaGly------GluPheTrpAlaGlySer 67
                                88 LysGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 105
                                                                                                                                                                                                                                                                      31 AspTyrAsnAlaProAspCysArgPheIleAspValLysLysGlyGlnGlnIleTyrVal 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2520 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34..2121
                                                                                                                                                                                                                                                                                                                                                                                        52.50%
                                                                                                                                                                                                                                                                                                                                                                        13.03%
                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ength:
```

Search completed: December 29, 2003, 22:08:08 Job time: 39.972 secs

```
Pred. No. is the number of results predicted by chance to have a
```

OM nucleic - nucleic search, using sw model Minimum DB seq length: 0
Maximum DB seq length: 200000000 Total number of hits satisfying chosen parameters: Scoring table: Sequence: Title: Perfect score: Run on: Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Database US-10-019-455A-46 384 December 29, 2003, 22:08:26; Search time 1216 Seconds (without alignments) 12918.830 Million cell updates/sec IDENTITY_NUC Gapop 10.0 , Gapext 1.0 1 atggcaagaatattgattct.....atattgacttcttctgtgaa 384 2888711 segs, 20454813386 residues 19: 20: 21: 22: 23: 24: GenEmbl:* GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd. gb ba : *
gb pac : *
gb pac : *
gb pac : *
gb pac : *
gb pac : *
gb pac : *
gb pac : * em_sts:*
em_vi:*
em_vi:*
em_vi:*
em_htg_inv:*
em_htg_inv:*
em_htg_other:*
em_htg_pln:*
em_htg_pln:*
em_htg_rod:*
em_htg_wam:*
em_htg_wam:* em_ou:*
em_or:*
em_ov:*
em_ov:*
em_pat:*
em_ph:* em fun:*
em hum:*
em in:* em_sy:*
em_htgo_hum:*
em_htgo_mus:* gb_un:* gb_sv:* em_ba:* em_htgo_other:* ro:* 5777422

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

;	4.	44	43	42	41	40	39	38	37	3 6	14.5	4.1	، د د	0 32	. د	ن د	7 6	2 6	, c	210) N	J N	4 C	22	2 6	200) F	100	10	; σ	15	14	13	12	11	10	9	30	7	ν,	י ויט	4.	ωı	ν,	1	NO.	Result	•
;	د	w	63.4	64	64	64	71.8	79.6	Ċ) <u> </u>	٠:	. 0) i	, c	٠.	4 .	٠,) N	n c	ν i	ם ה ה	, c	85.	5 6	ກຕ	рα	א ק	ОΟ	υ α υ α υ	7 0			·w	94.	330	w	4	4		4	4		4	384	384	COLE	1	
	16.5	16.5	16.5	16.7	16.7	16.7	·œ	20.7		٠.	٠,٠	٠,	, .		ა -	7 1	٠:		ο.	ъ;	Α.	4	4	4	Α.	Α.	74.3	٠:	74.0	٠.	4.	4.	. 6	6	LΠ	ū	9	9	89.6	9	۰	9	.9		100.0)
	w	Y	396	oα	a) a	4 (1 5 6	'nυ	nυ	7 6	v	7 1 1 1	477	_	4 0	ָ פוני פוני	055	261	261	1422	923	923	B 6 U	846	521	521	521	521	204	ა ი ი	0 0) (J	330	330	330	ū	Ġ	947	4	Ν	384	384	384	384	GTACT	3	
	თ	7.7	, (2	σ	۰σ	٦ ٢	, ,		, u	οV	٠,	0 1	, ı	лŧ	υ (n (٠ ٦	o i	י עם	σ.	9	თ									ס ת						10	10			10					, t	₩ H	
	AX253435	0 ' '	1 4 1 5	AXUL6 / 60	1 6	TIME	9 0	000))))))	なっていている	0705016	E C 2 C 4 3	95015X	F23351	C10616	3351	D0931	D0108	D0931	D0108	SA2425	D0931	1083	350	3326	9125	5477	6231	5881	9310	BD010802	100100		7001		8	333	439	D0931	082	AF243504	310	D010	009313	010			
	AX253435 Sequence		BT007775 Synthet	7044 Homo sa	788 Semieno	45 Seguer	322 M.musculu	67884 Rattus no	52324 Homo e	52326 Homo e	34428 Human	52325 Homo	0362 Mus musc	233519 Rana ca	106161 Rattus	233518 Gallus	117 Novel p	010816 Novel po	3130 Novel	D010829 Novel	2552 Homo s	93121 Novel	10820 Novel	243505 Homo sap	233261 Homo s	91252 Sequence	54774 S	2311 Sequenc	58818 Sequer	93103 Novel	10802 Novel	93131 Novel	010830 Novel	093118 Novel	0817	010030 NOVEL	Arzosos Movel	משויו ליניניניני	ATTA MOVET	010821 NOVET	Ark45504 Movel	DANCE TO MAKE	DOLOGO NOVEL PO	DISCONDING PO	010835 Novel		Description	

ALIGNMENTS

```
DEFINITION
ACCESSION
                                                                                                                                                                        RESULT 2
BD093136
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                               VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 384; DB 6; Length 384; Best Local Similarity 100.0%; Pred. No. 2.1e-105; Matches 384; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and DNA thereof Patent: JP 2001069994-A 36 21-MAR-2001; TAKEDA CHEMICAL INDUSTRIES LITD OS Rattus sp. (rat) PD 2001069994-A/36 PD 21-MAR-2001
Rattus sp. Rattus sp. Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                             Novel polypeptide and its DNA.
BDD93136
BD093136.1 GI:22638724
WO 0102564-A/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A61P19/08,

PC C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC G01N33/53//

PC C12P21/08,C12N15/00,A61K37/02,C12N5/00

CC CC Location/Qualifiers

FH Key Location/Qualifiers

FT forganism='Rattus.sp. (rat)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DQ
I d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PR
PR
PR
PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                           ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                  CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTGGGCTGGCAGTGTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61F9/00,A61F19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρυ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g 10
                                                                                                                                                                        384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 105 t
                                                                                                                                                                              DNA
                                                                                                                                                                              linear
                                                                                                                                                                            PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

DEFINITION ACCESSION VERSION

Novel polypeptide and DNA thereof. BD010805 BD010805 I GI:18639178

SOURCE

Mus sp.

KEYWORDS

JP 2001069994-A/6

RESULT 3 BD010805 LOCUS

BD010805

DNA

PAT 31-JAN-2002

```
REFERENCE
AUTHORS
                               Ş
                                                                         맑
                                                                                                        S
                                                                                                                                                В
                                                                                                                                                                                    Ş
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
361
                                                                           301
                                                                                                              301
                                                                                                                                                                                                                             181
                                 361 ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                       241
                                                                                                                                                                                                                                               181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                            121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                 61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC
                                                                                                                                                                                                                                                                                                                                                                                                                   61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HIDEYUKI TANAKA
OS Rattus sp. (rat)
PN WO 0102564-A/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 384)
Ito, Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 36 11-JNA-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PR PR PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        n 100.0%; Score 384; DB 6; I Similarity 100.0%; Pred. No. 2.1e-105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A61K38/17
ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                    CCCAGCCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATTCCAACC
                                                                         CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                  TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                                                                                                                                             AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                        ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC
                                                                                                                                                                                       TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2000 WC 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Хеу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02, C12R1:19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                      300
                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
```

```
RESULT 4
BD093106
LOCUS
 VERSION
KEYWORDS
                                                                                                                                                                                                    5
                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                      ACCESSION
                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGGACTGTAGGTTCAATGATC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PC C07K14/
G01N33/53//
PC C12P21/
CC Key
FH Key
FT source
FT /organi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mo
Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 6 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
384 b
Movel polypeptide and its DNA.
3D093106
BD093106.1 GI:22638694
WO 0102564-A/6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PR GG SO SO SO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SHINICHI MOGI,
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A61P19/08,
C C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC
                                                                                                                                                                                                          ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                      CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC: 360
                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 60
                                                                                                                                                                                                                                                                                                                         TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                            TTCTGGGCTGGCAGTGTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source 1. .384
/organism='Mus sp. (mouse)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP 2001069994-A/6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus sp. (mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89.6%;
93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ogi, K., Okubo, S., Mogi, S., Noguchi, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 344; DB 6
Pred. No. 3e-93;
                                                                          384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       107 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 6; Length 384;
                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Gaps
```

```
RESULT 5
AF243504
                                                                               밁
                                                                                                                                                           밁
                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                  301
                                                                               361
                                                                                                                                                             301
                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GTATTTATGGATAAACTTTCTTATAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOVE1 POJYPEPTIGE AND ITS DNA
PATENT: WO 0102564-A 6 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PI
PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PR PR PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ito, Y., Nishi, K., Ogi, K., Yoshimura, K. and Tanaka, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A61K38/17,
C A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                    ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                      CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                       AAGAAAGGGCAGAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 240
                                                                                                                                                                                                                                                                                                                                               AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                               ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                           CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 360
                                                                                                                                                                                                                                           TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTAGGTTATTTC 300
                                                                                                                                                                                                                                                               TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus sp. (mouse)
WO 0102564-A/6
17AN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA"
/db_xref="taxon:10095"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89.6%; Score 344; DB 6 93.5%; Pred. No. 3e-93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            c
83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          111 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Okubo, S., Mogi, S., Noguchi, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 6; Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
```

DEFINITION ACCESSION

AF243504

AF243504

AF243504 929 bp mRNA linear Mus musculus fibrocyte-derived protein (Fdp) mRNA,

complete

929 bp

```
REFERENCE
AUTHORS
                             Š
                                                                  밁
                                                                                                     Ş
                                                                                                                                        밁
                                                                                                                                                                     Ś
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                        249
369
                               361
                                                                                                       301
                                                                                                                                                                           241
                                                                                                                                                                                                               189
                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  359;
                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (09-MAR-2000) Biotechnologies, Institut Pasteur, 25 rue du Dr. Roux, Paris 75015, France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cohen-Salmon, M., I
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AF243504.1 GI:11991841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mesenchyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10998416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. Biol. Chem. 275 (51), 40036-40041 (2000)
                                                                                                                                                              TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                      AAGAAAGGGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                            ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCAAGAATATTGATTCTTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                    ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                    ATTICTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 188
                                                                                                                                                                                                                                                                                                                                                        GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 128
ACGGATATTGACTTCTTCTGTGAA 392
                                                                     CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 368
                                                                                                        CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                          TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 308
                                                                                                                                                                                                               AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 248
                                                                                                                                                                                                                                                                                                                   ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ), a new fibrocyte-derived protein related to MIA/CD-RAP, has an vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 929)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="Fdp"
/codon start=1
/codon start=1
/product="fibrocyte-derived protein"
/protein id="AAG42355.1"
/protein id="AAG42355.1"
/db xref="Gi:11991842"
/translation="MARIJILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
AACEDYNAPDCRFIDVKKQQIYYYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
NLVKEQRVYQEATKEIFTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gene="Fdp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89.6%;
93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        156 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Frenz, D., Verpy, E., Voegeling, S. and Petit, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      220 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 344; DB 1
Pred. No. 3e-93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 929;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
BD010821
                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                      밁
                                                                                        Ś
                                                                                                                              맑
                                                                                                                                                            S
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                      361
                                                                                                                                                                                                       191
                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                            131
                                                                                                                                                                                                                                                                                                              121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                    71
                                                                                                                                                                                                                                                                                                                                                                                    61 ATGITTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                        11 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 70
                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGCAAGAATATTGATTCTTTTGCTTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel polypeptide and DNA thereof Patent: JP 2001069994-A 22 21-MAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 947)
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JP 2001069994-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD010821.1 GI:18639194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD010821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel polypeptide and DNA thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD010821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G01N33/53/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
A61P19/08,
ACGGATATTGACTTCTTCTGTGAA 384
                                                          CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                     AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCTGGAGAG 250
                                                                                                                                                                                                                                       AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                  GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 130
                                                                                                                               TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 310
                                                                                                                                                               TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                            ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATCGATGTC 190
                                                                                          CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism='Mus sp. (mouse)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JP 2001069994-A/22
21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus sp. (mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1. .947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 344; DB 6
Pred. No. 3e-93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            947 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           289 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6; Length 947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                          370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                           Ś
                                                                                   뭐
                                                                                                                 Š
                                                                                                                                                        밁
                                                                                                                                                                                  Ş
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                         뭉
                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Locus
                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                  301
                                                                                                                                                                                                                          131
                                                                                                                                                                                     181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                        121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        371 ACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                              359;
                                                                                                                                                                                                                                                                                                                        61 AIGITTAIGGATAAACTIICTICTAAGAAGTIGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIDÉYUKI TANAKA
OS MUS SP. (MOU
PN WO 0102564;
PD 11-JAN-2001
PF 29-JUN-1999
PR 30-JUN-1999
PI YASUAKI ITO,
                                                                                                                                                                                                                                                                                                                                                                               1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and its DNA.
BD093122
BD093122.1 GI:22638710
WO 0102564-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ito,Y., Nishi,K., Ógi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 22 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 947)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ds sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A61K38/17
                   CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 370
                                                                                                     TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                         GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 130
                                                  CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                   TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 310
                                                                                                                                                      AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 250
                                                                                                                                                                                                                                                                                                                                                           ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 70
                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus sp. (mouse)
WO 0102564-A/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۵
و
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                              89.6%;
93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 3e-93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 344; DB 6; Length 947;
                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 947 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    289 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                              25; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
 밁
                           Ş
                                                                  В
                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MMU243939
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
                                                                                                                                                  Query Match 89.6%;
Best Local Similarity 93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                            sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5'UIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 958) Rendtorff, N.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genomics 71 (1), 40-52 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AJ243939.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21100875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Mial gene).
GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT
                                                                                                                                                                                                                       273
                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                      NLVKEQRVYQEATKEIPTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="Mial"
23. .81
                                                                                                                                                                                                                                     /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                           24. .410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:10090"
/chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                         'gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                         codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'tissue_type="whole fetus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                           gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 map="79.4-80 cM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:12619174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                v stage="12.5 pc"
.958
                                                                                                                                                                                                                       161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _type="mRNA"
                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                     225 g
```

```
61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                            1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (20-JUL-1999) Rendtorff N.D., Department of Medical Genetics, Institute of Medical Biochemistry and Genetics, Blegdamsvej 3, 2200 Copenhagen N, DENMARK Related sequence: AJ242552.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent polymorphism that abolishes translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        melanoma inhibitory activity-like protein; Mial gene Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MMU243939 958 bp mRNA linear ROD 29-JAN-2001 Mus musculus mRNA for melanoma inhibitory activity-like protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rendtorff, N.D., Frodin, M., Attie-Bitach, T., Vekemans, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                           ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product="melanoma inhibitory activity-like protein"
/protein id="CAC27444.1"
/db_xref="01:1261915"
/translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
/translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
**RAGEDYNAPDCRFFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
                                                                                                                                                                                                                                                                                                   Score 344; DB 10; Length 958; Pred. No. 3e-93;
                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                   0
```

```
RESULT 9
AF233333
       Ş
                                                                                 В
                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE
PUBMED
                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                               359;
                                                                                                               1 ATGGCAAGAATATTGATTCTTTTGCTTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (10-FEB-2000) Pathology, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 1054)
Robertson, N.G., Heller, S., Lin, J.S., Resendes, B.L., Weremowicz, S., Denis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Rodentia; Sciurognath; Muridae; Murinae; Mus. 1 (bases 1 to 1054)
1 (bases 1 to 1054)
1 (bases 1 to 1054)
1 (bases 1 to 1054)
1 (bases 1 to 1054)
1 (bases 1 to 1054)
1 (bases 1 to 1054)
1 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
2 (bases 1 to 1054)
3 (bases 1 to 1054)
3 (bases 1 to 1054)
3 (bases 1 to 1054)
3 (bases 1 to 1054)
4 (bases 1 to 1054)
3 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
4 (bases 1 to 1054)
5 (bases 1 to 1054)
5 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)
6 (bases 1 to 1054)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus otoraplin mRNA, complete cds. AF233333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AF233333.1 GI:8927429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10873378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2033461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AF233333
ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                      Angechaeganarrearrerringerreegegeerrergerrerarereegekaregr 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACGGATATTGACTTCTTCTGTGAA 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 323
                                                                                                                                                                                                                                                                                                                                                                                                         296
                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS NUVKECRVYQEATKEIFTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
/product="otoraplin"
/protein_id="AAF82079.1"
/db_xref="GI:9927430"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="OTOR"
                                                                                                                                                                                                                                                 89.6%;
                                                                                                                                                                                                                                                                                                                                                                                                      183 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             type="mRNA"
                                                                                                                                                                                                                       0
                                                                                                                                                                                                                   Score 344; DB 10; Length 1054; Pred. No. 3e-93; 0; Mismatches 25; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                  265 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1054 bp
                                                                                                                                                                                                                                                                                                                                                                                                  310 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROD 06-JUL-2000
                                                                                                                                                                                                                   Gaps
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
BD010836
                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CO'TAENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pocus
                                                                     Matches 330;
                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 378 ACGGATATTGACTTCTTCTGTGAA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              198 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               138 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
55 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACCT 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus sp. Rattus sp.
                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PI YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI MOGI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mog
Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 37 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel polypeptide and DNA thereof. BD010836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAKEDA CHEMICAL INDUSTRIES LTD
OS Rattus sp. (rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP 2001069994-A/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD010836.1 GI:18639209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus
                                                                                                                                                                                                                                                                                                                                                                                                   G01N33/53/
                                                                                                                                                                                                                                                                                                                                                                                                                                           A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 330)
                                                               85.9%; Score 330; DB 6; 1 ilarity 100.0%; Pred. No. 5.4e-89; Conservative 0; Mismatches 0;
                                                                                                                                                                         91
                                                                                                                                                                                                                                                                                                                                                                                                                                                            YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                   C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus sp. (rat)
JP 2001069994-A/37
                                                                                                                                                                                                                                                                        /organism='Rattus sp. (
   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                             C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-MAR-2001
                                                                                                                                                                         b
                                                                                                                                                              /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
62 c 91 g
                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                  .330
                                                                                                                                                                                                                                                                                             (rat)'
                                                                                                       DB 6; Length 330;
                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 31-JAN-2002
                                                                 0
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  377
```

```
밁
                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
BD093137
                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
DEFINITION
                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                         55 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 174
      1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                          HIDEYUKI TANAKA
OS RATTUS 59. (rat)
PN WO 0102564-A/37
PD 11-JAN-2001
PF 29-JUN-2000 WO 2000JP004278
PR 30-JUN-1999 JP 99P 186718
PR 30-JUN-1999 JP 99P 186718
PR 30-JUN-1999 JP 99P 186718
                                                                                                                                                                                                                                                     SSSE
                                                                                                                                                                                                                                                                                                                                   PC
PI
PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 37 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus sp. Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel polypeptide and its DNA. BD093137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO 0102564-A/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD093137.1 GI:22638725
                                                                                                                                                                                                                                                                                                                    A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 330)
                                                                         Conservative
                                                                                                                                                         16
                                                                                                                                                                                                                                                                                                                                       MOGI,
YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYÜKI TANAKA
                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                                                                                                               A61K39/395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088// (C12P21/
                                                                                                                                                                                                                                                                                                                                C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00, PC
                                                                                                                                                                                                                                                                                   02,C12R1:19)
                                                                                                                                                 /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
a 62 c 91 g 80
                                                                                                                                                                                                                                    Location/Qualifiers
                                                                 85.
100.0%; F1
                                                                  85.9%; Score 330; DB 6; Length 330; 100.0%; Pred. No. 5.4e-89; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                   Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         330 bp
                                                                                                                                                      86 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 27-AUG-2002
                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
   Ş
                                   멍
                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
BD010817
LOCUS
                                                                                                                                                                 ORIGIN
                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                 Best
                                                                                                  Matches
                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                              source
                                                                                                               Local
115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 174
                                                                                                308;
                                                                                                                                                                                                                                                                                                                                            PC CV,...
G01N33/53//
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel polypeptide and DNA thereof. \tt BD010817
                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                            SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent: JP 2001069994-A 18 21-1
TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD010817.1 GI:18639190 JP 2001069994-A/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD010817
                                                                                                                                                                                                                                                                                                                                                                                            A61P19/08
                                                                                                                                                                               91 a
                                                                                                Conservative
                                                                                                                                                                                                                                                     /organism='Mus sp. (mouse)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus sp. (mouse)
JP 2001069994-A/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-MAR-2001
                                                                                                                                                                        /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
a 60 c 92 g 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       330 bp
```

```
55 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    355 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             295 TATTTCCCCAGCAACTTGGTTAGAGAGCGACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         235 GGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         175 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGGACTGTAGGTTCATC 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel polypeptide and DNA thereof Patent: JP 2001069994-A 18 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                      76.8%; Score 294.8; DB 6; Length 330; 93.3%; Pred. No. 2.6e-78;
                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                            87 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                            22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                            .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 31-JAN-2002
                                                                                                                            Gaps
                                                                                                                            0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
멍
                              á
                                                                   밁
                                                                                                  Ś
                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                               source
                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  175 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             355 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                115 TATACCATTICICIGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
61
                                                                                                                                        308;
                                                                                                                                                                                                                                                                                                                                                                                                   PI MOGI,
PI YUKO NO
PC C12N15/
A61K38/17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ito,Y...Nishi,K...Ogi,K.., Okubo,S...Mogi,S.., Noguchi,Y.., Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 18 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (Dases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel polypeptide and its DNA. BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OGI, SHOICHI OKI
HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO 0102564-A/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD093118.1 GI:22638706
                                                                                                                                                                                                                                                                                                                                  SSSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                         CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTC
TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                     CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                        Conservative
                                                                                                                                                                                                                              91
                                                                                                                                                                                                                                                                                                                                  Key
                                                                                                                                                                                                                                                                                                                                                                                                                YUKO'N OGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                    02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus sp. (mouse)
WO 0102564-A/18
                                                                                                                                                                                                                                                                                                                                                                                       A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                            /mol_type="genomic DNA"
/db_xref="taxon:10095"
60 c 92 g
                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                             organism="Mus sp."
                                                                                                                                                       76.8%;
93.3%;
                                                                                                                                        0; Mismatches
                                                                                                                                                       Score 294.8; DB 6;
Pred. No. 2.6e-78;
                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330 bp
                                                                                                                                                                                                                               87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                          22; Indels 0;
                                                                                                                                                                         Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 27-AUG-2002
                                                                       60
```

```
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD010830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
밁
                                Ś
                                                                       밁
                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                              Query Match
Best Local Similarity
Matches 301; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235 GGGGCATTCTGGGCAGGGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        175 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                   109 TGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCCGGACTGTAGG 168
19
                                                                                                            49
                                                                                                                                                                                                                                                                                                                                                   PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
FH Key
FT source
FT /organi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel polypeptide and DNA thereof.
BD010830
BD010830.1 GI:18639203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 31 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
OS Rattus sp. (rat)
PN JP 2001069994-A/31
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP 2001069994-A/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD010830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 330
TGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGG
                                                                       GCCGGGCATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAG 60
                                                                                            GCCGGGCATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAG 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61P19/08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02, PC
                                                                                                                                                                                                                                           84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI
                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                  /organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                 C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                       /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
56 c 90 g
                                                                                                                                                                74.9%;
                                                                                                                                                  0; Mismatches
                                                                                                                                                                Score 287.6; DB 6; Length 307; Pred. No. 4*1e-76;
                                                                                                                                                                                                                                                                                                                                                                          1. .307
                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307 bp
                                                                                                                                                                                                                                               77 t
                                                                                                                                                    4
                                                                                                                                                    Indels
                                                                                                                                                    1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 31-JAN-2002
                                                                                                                                                    Gaps
```

Search completed: December 30, 2003, 04:08:00 Job time : 1217 secs

```
Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        December 30, 2003, 01:02:37 ; Search time 1278.03 Seconds (without alignments)
7302.593 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-46
384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 atggcaagaatattgattct....atattgacttcttctgtgaa 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10:
11:
12:
13:
14:
16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22781392 segs, 12152238056 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em estplem http://em.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.http://estplem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_estmu:*
em_estov:*
                                                                                                                                                                                                                                                                                                                                                    em gss hum:
em gss inv:
em gss jiv:
em gss yrt:
em gss fun:
em gss fun:
em gss mam:
em gss mam:
em gss mar:
em gss mad:
                                                                                                                                                                          em_gss_phg:*
em_gss_vrl:*
gb_gss1:*
gb_gss2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_estba:*
em_esthum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_estin:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45562784
```

Ü	į.	·		8	0	۲	۲	9	0	0	Ü	æ	4.	7.	97.	00.	21.	21.		24.			26.	w	14		18	18		32	69	u O	22	27.	N	42	4	4	4	4
9	•	.0	9	7.	ω.	œ	œ				:	2	4.	Ü	ū	6	۲	:-		<u>ب</u>	32.8		٥.	4.	7.	7.	9	9	ō	0	0	œ	Ë	Ü	9	Ö	ø	ø	œ.	Ö
ထ	~	1	533	N	7	ø	4	U	\vdash	Ó	ø	w	4	97	0	ω	4	7	w	ø	186	4	7	7	7	œ	ø	N	œ	œ	0	on.	φ	0	œ	7	9	ω	0	o
			14							9	13	14	3	13	Ľ	φ		10			Ľ																			
M71593	43340	691	4647	79657	3703	50976	20898	14146	17964	1790	56685	3604	56376	44484	41894	2134	2332	6479	2585	2279	BQ564457	04796	56322	56721	56926	56677	7482	23644	56517	56878	56734	23262	56541	56693	56376	56563	61154	56847	56494	56974
715936	433401	691795	4647 zd	796570	370333	509768	208982	141467	17964 7	17905 #	566853	360404	563767	444840	418941	21345	23324 c	647928	25854 F	22797 n	BQ564457	047965	563227	567219	569268	566776	748241	236443	565179	568785	567343	232622	565411	566932	563768	565637	611549	568471	564944	569741
I-E-EJO	-H-COO	022483	13	GNNUC:	0479	-R-FSO	-R-DY1	n trog	17964	17905	71g06.	ENC	06c09.	4448	4189	1001	3d01	6479	2589	7b12.r	gi17a12.y	s musc	01a05.	82h08.	125al:	69507	3#01	4645 1	32a07	114f04	86008	232622	37b12.	73909.	06c0	42g03.	611549	108g04	27g09.	135f

ALIGNMENTS

ი ი

0 0 0 0

ი

Location/Qualifiers	FEATURES
Seq primer: M13RP1 reverse primer (ABI).	
Plate: 143 row: b column: 10	
Email: kacharb@nidcd.nih.gov	
Fax: 301-402-1765	
Tel: 301-402-1599	
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA	
National Institute of Deafness and other Communication Disorders	
Structural Cell Biology	
Contact: Kachar, B.	COMMENT
Unpublished	JOURNAL
onset of hearing	
EST analysis of gene expression in the mouse Organ of Corti at the	TITLE
Kachar, B.	AUTHORS
	REFERENCE
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.	
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	
Mus musculus	ORGANISM
Mus musculus (house mouse)	SOURCE
BOH.	KEYWORDS
BQ570035.1 GI:21473352	VERSION
BQ570035	ACCESSION
clone gi143b10 5', mRNA sequence.	
gi143b10.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA	DEFINITION
BQ570035 398 bp mRNA linear EST 19-JUN-2002	LOCUS
	BQ570035
	RESULT 1

Result

%
Query
Score Match Length DB ID

SUMMARIES

No.

33 33 33 44 44 44 44 44

8 8 8 8 9 9 9 6 6 6 6 6

BQ570035 BQ564607 BQ568498 BQ564134

BQ570035 gi143b10. BQ564607 gi19h02.y BQ568498 gi109c02. BQ564134 gi11d01.y

Description

```
Query Match

89.6%; Score 344; DB 13; Length 398;
Best Local Similarity 93.5%; Pred. No. 2.2e-95;
Matches 359; Conservative 0; Mismatches 25; Indels 0; Gaps
```

1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60

BASE COUNT ORIGIN

/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="manua"
/mol_type="m

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ564607
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A88 bp mENA linear EST 19-JUN-200:
gi19h02.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gi19h02 5', mENA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plate: 19 row: h column: 02
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Structural Cell Biology
National Institute of Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ564607.1 GI:21467924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cccascaacrissisaassascascerstaraccassascaccaassassasaccaassasca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 488)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301-402-1599
/dev stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vecto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                        /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                               clone="gi19h02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               192
```

vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was Total RNA was extracted using the micro Fastrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap xR epithelium was carefully dissected out of the modiolus. 89.6%; Score 344; DB 13; Length 488; 93.5%; Pred. No. 2.5e-95; 0; Mismatches 0 Gaps 186

Matches 359; Conservative Best Local Similarity Query Match 187 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 246 127 121 181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240 67 GTATTTATGGATAAACTTTCTTATAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 126 61 ATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120 1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGGCTCTGTGCCGGGCATGGC 60 TITTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 306 TTCTGGGCTGGCAGTGTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 66 143 a Synthesized with DNA polymerase and RNASE H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with Econ I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with Gigapak III Gold and, upon titration on XLI Blue MRF, cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exasist Interference resistance helper phage (catalogue # 211203) was adopted to rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGAAACACCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal Cyclers (MJ Research, and analyzed on 3700 altermated canillary. Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." a ㅁㄷ☞ㅎ ₽

ORIGIN BASE COUNT

Ş В Ş В Ş 밁 Ś В

	Email: k Plate: 1 Plate: 1 Seq prin FEATURES BOURCE	National 50/4249 Tel: 301 Fax: 301	AL.	Eukaryota; Mammalia; E REFERENCE 1 (bases 1) AUTHORS Kachar, B. TITLE EST analysi	EST.	RESULT 3 BQ568498 LOCUS DEFINITION gil09c02.yl clone gil08 CCESSION BQ568498 BQ568498	Qy 361 ACGGAT Db 367 ACGGAT	Db 307 CCCAGC	Qy 301 CCCAGC
/organism="Mus musculus" //mol type="mrNA" /strain="BALB/c" /db xxef="taxon:10090" /db xxef="taxon:10090" /db xxef="taxon:10090" /db xxef="taxon:10090" /clone="gil09c02" /sex="male and female" /dev stage="Post natal day 5 to 13" /clone=lib="Mouse Organ of Corti; Vector: pBluescript; The /note="Gil09c02" /dev stage="Post natal day 5 to 13" /clone=lib="Mouse Organ of Corti; Vector: pBluescript; The /note="Gil09c02" /clone=lib="Mouse Organ of Corti; Vector: pBluescript; The /note="Gil09c02" /clone=lib="Mouse Organ of Corti; Vector: pBluescript; The /note="Gil09c02" /clone=lib="Mouse Organ of Corti; Vector: pBluescript; The /clone="Gil09c02" /clone=lib="Mouse Organ of Corti; Vector: pBluescript; The /clone="Gil09c02" /clone="G	1: KaChatD@nldCd.nln.gov e: 109 row: c column: 02 primer: M13RP1 reverse primer (ABI). Location/Qualifiers 1514	National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599 Fax: 301-402-1765		ryota; merazoa; chordata; craniaca; vercebraca; Eutereoscomi; alia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. bases 1 to 514) ar.B. analysis of gene expression in the mouse Organ of Corti at the	GI:21471815 15 (house mouse) 15 (house mouse)	Mou 02	ACGGATATTGACTTCTTCTGTGAA 384 	CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 366	DACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  125 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ564134 534 bp mRNA linear EST 19-JUN-200: gilld01.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gilld01 5', mRNA sequence.

BQ564134 BQ564134.1 GI:21467451
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 ATGCCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                              ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAGCAACTIGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGAAAGGGCAGAGCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCCACCAAGGAGATCCCAACC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal Cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 5-1.150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 23% have hits in GenBank, but do not have assigned function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        yield of the phage library was estimated to be 11,00,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 l respectively. The cDNA was then directionally ligated the Uni-ZAp XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF, cells, the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 344; DB 13; Pred. No. 2.6e-95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 514;
                                                                                                                                                                         EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

밁

Matches

RESULT 4 BQ564134

DEFINITION

KEYWORDS ACCESSION

VERSION

В

Ś В

Ş

Ş 밁 S 밁 Ś 밁

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: 11 row: d column: 01 Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Kachar,B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; malia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. (bases 1 to 534)
      /dev_stage="Moste Andal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 5 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 13"
/dev_stage="Noste Natal day 6 to 14"
/dev_stage="Noste Nata day 6 to 14"
/dev_stage="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301-402-1765
   the 5' end of universal M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone="gilld01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        type="mRNA"
reverse primer (CAGGAAACAGCTATGACC) and
   25%
```

FEATURES

source

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63 GTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGGGAGATGAGAAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ569741 560 bp mRNA linear EST 19-JUN-2002 gi135f01.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi135f01 5', mRNA sequence.
                                                                                                                                          Unpublished Contact: Kachar,B. Contact: Kachar,B. Structural Cell Biology Structural Cell Biology National Institute of Deafness and other Communication Disorders National South Drive, NIH, Bethesda, MD 20892-8027, USA 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                           Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the
onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
Email: kacharb@nidcd.nih.gov
plate: 135 row: f column: 01
Seq primer: Ml3RP1 reverse primer (ABI).
                                                                                              Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                          Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ569741.1 GI:21473058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGATATTGACTTCTTCTGTGAA 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATCGATGTC 182
                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, WA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 344; DB 13;
Pred. No. 2.7e-95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

멍 Ş 밁 Ş 밁 Ş 밁 ş 밁

TITLE

BASE COUNT

Query Match 89.6%; Best Local Similarity 93.5%; Matches 359; Conservative

0; Mismatches Score 344; DB 13; Pred. No. 2.8e-95;

Length 560;

0

0

S 멍

```
160 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      epithelum was carefully dissected out of the modern trotal RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 up mRNA was reverse transcribed using primed with the linker- primer and transcribed using primed with the linker- primer and transcribed using primed with the linker- primer and transcribed using primed with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated with Xho I. The cDNA was sequentially size fractionated with Who I. The cDNA was then directionally ligated to the Uni-Zap XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak II Gold and, upon titration on Xil Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exhsist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was accurated with the concerts of the cDNA clones were generated with the concerts of the cDNA clones were generated with the concerts of the cDNA clones were generated with the concerts of the cDNA clones were generated with the concerts of the cDNA clones were generated with the concerts of the cDNA clones were generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/clone_lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note=
strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POPS polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
BQ564944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     366 ACGGATATTGACTTCTTCTGTGAA 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361 ACGGATATTGACTTCTTCTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 608 bp mRNA linear EST 19-JUN-200 gi27g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi27g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \operatorname{EST} analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ564944.1 GI:21468261
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: 27 row: g column: 09
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGITTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTGGCCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 608)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301-402-1599
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti (DNA pBluescript")
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
/clone="gi27g09"
                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                        sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               365
```

```
169 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed with Ecor I adapters in the presence of ligase and digested with Mol The cDNA was sequentially size fractionated with Kho I. The cDNA was sequentially size fractionated virus to respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with Ecor I and Xno I. The phagemid was packaged with Gigapak III Gold and, upon titration on XL1 Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 resource plasmid DNA from the phages. Upon plating of the rescue plasmid DNA from the phages. Upon plating of the rescue plasmid DNA from the phages. Upon plating of the rescue plasmid DNA from the phages. Upon plating of the rescue plasmid DNA from the phages. Upon plating of the conserve granted with the universal M13 reverse primer (CAGGAAACGCTNTGACC) and 25% strength Biolove terminator sequencing chemistry (Abblided strength Biolove terminators esquencing chemistry (Abblided
strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, WA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA).

The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2, 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus Total RNA was extracted using the micro Fasttrack kit (catalog # KI593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
```

В Ş 밁 밁 Ś Best Local Similarity Query Match 241 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGTTATTTC 300 193 181 133 121 73 13 61 ATGTTTATGGATAAACTTTCTATCTAACAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120 1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGTGCGGATGAGGAGTGTGTCTATACT 132 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 72 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 192 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180 Conservative 89.6%; 93.5%; Score 344; DB 13; Pred. No. 2.9e-95; 0; Mismatches 25; Length 608; Indels <u>.</u> Gaps

Ś 밁 BASE COUNT

ş 밁 á

```
BQ568471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            630 bp mRNA linear EST 19-JUN-2002 gil08g04 yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil08g04 5', mRNA sequence.
BQ568471
BQ568471.1 GI:21471788
BST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \operatorname{EST} analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: 108 row: g column: 04
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ccchacchactragagaagaachaccagcararacchagaagacchacchaagaaarccchacc 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 630)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      musculus (house mouse)
Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlabad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligody linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNAse H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with Ecor I adapters in the presence of ligase and digested
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev stage="Post natial day 5 to 13"
/clone lib="Mouse Organ of Corti; Vector: pBluescript"
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="gi108g04"
/sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strain="BALB/c"
```

밁 ঠ 片

Ś 밁 Ś

133

S 밁

241 193

Ś 닭

301

S 片

373 361

181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240 73 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGTGGGGATGAGGAGTGTGTCTATACT 132 61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGTGCAGATGAGGAGTGTGTCTATACC 120 13 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 72 1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC Similarity ACGGATATTGACTTCTTCTGTGAA 384 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 252 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 192 ACGGATATTGACTTCTTCTGTGAA 396 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 312 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300 178 a with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp (respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 yield of the phage (catalogue # 211203) was adopted to resoute plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% contents the first that the contents the contents of the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA clones were generated with the contents to the cDNA c strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POPS polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; as follows: 72% of genes have a copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." Conservative 93.5%; 111 c 0; Mismatches Score 344; DB 1 Pred. No. 3e-95; 167 g 174 t DB 13; Length 630; 25; Indels .. Gaps 372 0

ORIGIN BASE COUNT

Matches 359; Query Match Best Local

RESULT 8 BB611549 ACCESSION VERSION DEFINITION BB611549 RIKEN full-length enriched, 13 days embr musculus cDNA clone 3110083012 5', mRNA sequence BB611549 BB611549.1 GI:15393547 days embryo head Mus EST 31-AUG-2001

SOURCE

COMMENT

TITLE

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 696)
Arakawa T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hiramoto, K., Hori, F., Ishii, Y., Ito, M., Kawai, J., Konno, H., Koud, M., Koya, S., Matsuyama, T., Miyazaki, A., Nomura, K., Ohno, M., M., Koya, S., Okido, T., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasak, Okazaki, Y., Okido, T., Saito, R., Sakai, T., Sogabe, Y., Suzuki, H., D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., D., Shibata, K., Takahashi, F., Takeda, Y., Tanaka, T., Toya, T., Muzamatsu, M., and Hayashizaki, Y., Muzamatsu, M., and Hayashizaki, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          URL:http://genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh
Carninci,P., Shibata,Y., Muramatsu,M. and Hayashizaki,Y.,
M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
Normalization and subtraction of cap-trapper-selected cDNAs to
Prepare full-length cDNA libraries for rapid discovery of new
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-630 (2000)
Wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
Watahiki,M., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanaqawa 230-0045. Jar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RIKEN Mouse ESTs (Arakawa, T., et al. 2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Yamanaka,I., Kiyosawa,H., Kondo,S., Saito,T., Shihagawa,A., Aizawa Y., Fukuda,S., Hara,A., Itoh,M., Kawai,J., Shibata,K., Arakawa,T., Ishi,Y. and Hayashizaki Y.

Mapping of 19032 mouse cDNAs on mouse chromosomes. J. Struct. Func. Genomics 2 pre, L72-L86 (2001) Func. Genomics 2 pre, L72-L86 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 1757-1771 (2000) (11), 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      further details
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Y. and Hayashizaki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Please visit our web site (http://genome.gsc.riken.go.jp) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81-45-503-9222
                                                                                                                                                                                                          prepared by using trebalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. cDNA went through one round of normalization to Rot = 10.0 and subtraction to Rot = 50.0. Second strand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="3110083012"
/tissue_type="head"
cDNA was prepared with the primer adapter of sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="RIKEN full-length enriched, 13 days embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dev_stage="13 days embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                   Second strand sequence [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hara, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sasaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kouda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
BQ565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               474 bp mRNA linear EST 19-JUN-200:
g142g03,yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone g142g03 5', mRNA sequence.
B0565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                 EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ565637.1
                                                                                                                                                                                                                                                                                           Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                   onset of
                                                                                                                                                                                                                                                                                                                                                                                     Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 143
                                                                                                                                                            Plate: 42 row: g column: 03
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                     Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                         National Institute of Deal 50/4249 South Drive, NIH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTCTGGCAAGAGCACACGAAGACTACAATGCCCCGGGACTGTAGGTTCAATGATCTC
                                                                                                                                                                                                      Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGATATTGACTTCTTCTGTGAA 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĊĊĊĸĠĊĸĸĊŤŤĠĠŤĠĸĸĠĠĸĠĊĸĠĊĠŦĠŦĸŤĸĊĊĸĠĠĸĠĠĊĊŔĊĊĸĸĠĠĸĠĸŤĊĊĊĸĸĊĊ 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ссслассласттосттловарасрассаетствесласваессаестаевараттссласс зео
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               204 a
                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 474)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             was cleaved with XhoI and SstI."
122 c 176 g 194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hearing
                                                                                            /organism="Mus musculus"
/mol_type="mRNA"
/clone="gi42g03"
/sex="male and female"
/dev_stage="Post natal
                                                                                                                                               Location/Qualifiers
                                                      /db_xref="taxon:10090"
                                                                           /strain="BALB/c"
                                                                                                                              .474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:21468954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi;
Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 344; DB 10;
Pred. No. 3.1e-95;
                                                                                                                                                                                                                                                            Deafness and other Communication Disorders
NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 696;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

day 5

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                14 Argechaegararrearrectrirectriegesesectrereserretrarerecesesearet 73
                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGCAAGAATATTGATTCTTTTGCTTTGGGGGCCTTGTGGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                              GTATTTATGGATAAACTTTCTTCTAATAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 133
                                                                                                                                                                           ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGCAGATGAGGAGTGTGTCTATACC 120
ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
organ of Corti (OC) was fine dissected from a total of 386
organ of Corti (OC) was fine dissected from pp; 20 from p10;
from p6; 60 from p7; 46 from p8; 18 from p9; 20 from p10;
from p12 and 24 from p13. After killing animals by
14 from p12 and 24 from p13. After killing animals by
16 cervical dislocation followed by decapitation, the bulla
cervical dislocation followed by decapitation, the bulla
cervical dislocation followed by decapitation, the bulla
capsule of the cochinea was chipped away, stria vascularis
capsule of the cochinea was chipped and, stria vascularis
and spiral ligament were removed and the sensory
and spiral ligament were removed and the sensory
and spiral ligament were removed and the sensory
and spiral ligament were removed and the sensory
and spiral ligament were removed and the sensory
cotation was carefully dissected out of the modicule.

[Catalog # K1593-02; Invitrogen, Carlsbad, CA), according
(Catalog # K1594-02; Invitr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                library construction were carried out with the vector kit (catalog # 237612), Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both Gigapack III Gold Cloning kit (catalog # 237612), both Gigapack III Gold Cloning kit (catalog # 237612), both Gigapack III Gold Cloning kit (catalog # 237612), both Gigapack III Gold Cloning kit (catalog # 237612), both Gigapack III Gold Cloning # 237612), both Gigapack III Gold Cloning # 237612), both Gigapack III Gold Cloning # 237612), both Gigapack Contains an Xho I site First stranscribed using primed with the linker- primer and transcribed using primed with the linker- primer and transcribed using primed with the linker- primer and kinascribed using primed with the linker- primer and kinascribed using primed with the linker- primer and kinascribed using primed with DNA polymerase and kinascribed was given for color for the presence of ligase and digested with Xho I. The CDNA was sequentially size fractionated with the Uni-ZAP XR vector, which had been predigested with the Uni-ZAP XR vector, which had been predigested with Gold and, upon titration on Xii Blue MRF cells, the III Gold and, upon titration on Xii Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 yield of the phage library was estimated to be 11,100,000 yield of the phage library was estimated to be 11,100,000 yield of the phage (catalogue # 21103) was adopted rescue library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate, Plasmid DNA was grown in 96-well, 2 ml growth plate, Plasmid DNA was grown in 96-well, 2 ml growth plate, Plasmid DNA was grown in 96-well, 2 ml growth plate, Plasmid DNA was grown in 96-well, 2 ml growth plate, Plasmid DNA was grown in 96-well, 2 ml growth plate with the cartisbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the ather the cDNA clones were generated with the cartish and 25% universal M13 reverse primer (24GAAACAGCTATGACC) and 25% universal M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, performed on MJ Tetrad thermal cyclers (MJ Research,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 342.4; DB 13; pred. No. 7.8e-95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Ş 밁

```
ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ563768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               254 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      684 bp mRNA linear EST 19-JUN-200:
g106c09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone g106c09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ563768.1 GI:21466749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ563768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria;
1 (bases 1 to 684)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGATATTGACTTCTTCTGTGAA 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                сосрассрасттосттраларасрассраствтесрасрассрассрассрасттссрасс 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax: 301-402-1765
/sex="mase and remark"
/dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
organ of Corti (OC) samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post-natal post
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="gi06c09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 column: 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 19-JUN-2002
```

Query Match Local Similarity 241 193 181 133 121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180 358; 61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGGTGTGTCTATACC 120 73 GTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 132 13 ATGGCAGGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 72 1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60 ACGGATATTGACTTCTTCTGTGAA 384 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAAATGGAGCTGGGGCA 240 СССАВСЬНСТТВЕТТАВАВАВСЕЛАСВАВТВТАССАВВАВВЕССАССАВВВАВТТСЕЛАВС 360 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 192 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 252 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 372 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 312 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300 Conservative DNA was blunt ended with Pfu DNA polymerase, ligated with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagenid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Insure Frence resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96 well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Poster City, CA). Sequencing reactions were performed on MJ Tetrad thermal Cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2.12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function; 23% have hits in GenBank, but do not have assigned function; 23% have hits in GenBank and have know function; 23% have nits in GenBank and another assigned function; 23% have nits in GenBank and another assigned function; 23% have nits in GenBank and another assigned function; 23% have nits in GenBank and have assigned function; 23% have nits in GenBank and sequences assigned function; 23% have nits in GenBank and sequences assigned function; 23% have nits and sequences as sequences ase manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcribt was (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary 89.2%; 93.2%; 0 Score 342.4; DB 13; Length 684; Pred. No. 9.7e-95; 178 g Mismatches 192 t 26; Indels 0; Gaps

BASE COUNT

밁 Ś 밁 S 밁

ACGGATATTGACTTCTTCTGTGAA 396

Ś 밁

Š 밁

REFERENCE AUTHORS RESULT 11 BQ566932 FEATURES VERSION KEYWORDS COMMENT SOURCE DEFINITION **FOCUS** ACCESSION TITLE ORGANISM JOURNAL source 409 bp mRNA linear EST 19-JUN-200: gi73g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi73g09 5', mRNA sequence. Plate: 73 row: g column: 09 Seq primer: M13RP1 reverse primer (ABI). Contact: Kachar, B. Structural Cell Biology Unpublished EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA MUS MUSCUIUS BQ566932.1 GI:21470249 BQ566932 Email: kacharb@nidcd.nih.gov Kachar, B. Mus musculus (house mouse) Fax: 301-402-1765 (bases 1 to 409) /dev stage="post nata" day 5 to 13"
/dev stage="post nata" day 5 to 13"
/clone lib"Mouse Organ of Corti; Vector: pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from p6; 60 from p7; 46 from p8; 18 from p9; 20 from p10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the occhlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fastrack kit
(catalog # K1593-02; Invitrogen, Carlabad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Giapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, A, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcribed using
Moloney mith DNA polymerase and RNAse H Complementary synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNA was greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with ECOR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XII Blue MRF, cells, the yield of the phage library was estimated to be 11,100,000 301-402-1599 /sex="male and female" /db_xref="taxon:10090" /mol_type="mRNA" /strain="BALB/c" /organism="Mus musculus" Location/Qualifiers clone="gi73g09" EST 19-JUN-2002

JOURNAL COMMENT

FEATURES source

```
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 355;
                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 85.4%;
Best Local Similarity 92.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       387 CACGGCTATTGACTTCTTCTGTG 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120 CATTICICIGGCAAGAGCACAGGAAGACIACAATGCCCCGGACIGIAGGITCAICAAIGI 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGC-AGATGAGGAGTGTGTCTATAC 119
Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ565411 490 bp mRNA linear EST 19-JUN-200 gi37b12.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi37b12 5', mRNA sequence.
                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                             Mus
                                                                                                                                                                                                                                                                                                                                                                                 BQ565411.1 GI:21468728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACGGATATTGACTTCTTCTGTG 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTT 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGTTATTT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGC 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCTTGATGAGGAGTGTGTCTATAC 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGCGGTTCTATGTGCCGGGCATGGT 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAAC 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAAC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGA 266
                                                                                                                                            (bases 1 to 490)
                                                                                                                                                                                                                                                                                                 musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strength BigDy terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages (populating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 327.8; DB 13; Length 409; Pred. No. 2.4e-90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Gaps
```

밁

Ş 밁 Ş ঠ

밁

Ś

밁

Ş

ORIGIN

밁

Ś

BQ565411 RESULT 12

REFERENCE

AUTHORS TITLE

KEYWORDS VERSION ACCESSION

```
Plate: 37 row: b column: 12
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                     ilbrary consetruction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR digapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 by respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage (latalogue # 211203) was adopted to rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96 (TM) plasmid purification Kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (AGGAAACAGCATGACC) and 25% attranter H10Dv terminator semicarion chamistry (Annica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/clone="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (p) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   kacharb@nidcd.nih.gov
strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Poster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
/mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone="gi37b12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Deafness and other Communication Disorders
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY232622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 339;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. (CE 1 (bases 1 to 365)

RS Okazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osaco, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Hume, D.A., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Beisel, K.W., Blake, J.A., Bradt, D., Brusic, V., Chothia, C., Corbani, L.E., Cousins, S., Dalla, E., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Frazer, K.S., Gasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hitokawa, N., Jackson, I. J., Jarvis, E.D., Kanai, A., Kawaji, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Kurochkin, I.V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R., Maltais, L., Marchonni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Ramachandran, S., Ravasi, T., Redd, J.C., Reed, D.J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M.S., Teasdale, M., Verardo, R., Wanshaw, Boris, A., Yanagisawa, M., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, J., Yang, J., Yang, J., Yang, L., Kang, R., Takenaka, T., Konno, H., Nakamura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              362 CGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY232622
BY232622 RIKEN full-length enriched, adult inner ear Mus musculus cDNA clone F930026720 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY232622.1 GI:26413732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTTGTGGCTCTCTGTGCCGGGCATGGCA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGATATIGACTTCTTCTGGGAA 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCAT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTATGGATAAACTTTCTTAAAAAATTGTGTGCGGATAAGGAGTGTGTCTATACTA 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGGCACAAAATTGATTCTTTTGTTTTGGGGGGCCTTGGGGGTTCTATGTGCCGGGCATGGGG 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACCA 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGTTATTTCC 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTGGGCTGGCAGTGTTTATGGGGACCACCAGGATGAAATGGGAATTGTAGGTTATTTCC 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAAAGGGCAGCAAATCTATGTTTACTCCAAGCTGGTAACAAAAAACGGAGCTGGAAAGT 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCTCTGGCAAGAGCACAGGAAAATTACAATGCCCCAAACTGTAGGTTCATCGATGTCA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 312.6; DB 13; Pred. No. 1.3e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear EST 10-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

```
Ş
                                                                                                       밁
                                                                                                                                                                    S
                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                        Matches 317;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                    Local
121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                84 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 143
                                                                                                                                                                    61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                            24 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCCGGCCATGGT 83
                                                                                                                                                                                                                                                                                   1 ATGGCAAGAATAITGATICTITIGCTIGGGGGCCTTGIGGCTCTCTGIGGCCGGGCAIGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     prepare mouse tissues.

Tissues were provided by Kirk W. Beisel (Boys Town National Tissues were provided by Kirk W. Beisel (Boys Town National Research Hospital 555 North 30th Street Omaha,NE 68131 USA) whose assistance we gratefully acknowledge. Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hirozane
,T., Imotani,K., Ishi,Y., Itoh,M., Kawai,J., Konno,H., Miyazaki,A.,
Murata,M., Nakamura,M., Nomura,K., Numazaki,R., Ohno,M., Sakai,K.,
Sakazume,N., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami
,M., Maki,K., Matahiki,A., Muramatsu,M. and Hayashizaki,Y. Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,N., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-7-22 Suehiro-cho,
Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratory for Genome Exploration Research Group, RIKEN Genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nature 420, 563-573 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ,M., Sakazume,N., Sato,K.,
                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Computational Analysis of Full-Length Mouse cDNAs Compared with
                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="inner ear"
/dev stage="adult"
/clone_lib="RIXEM full-length enriched, adult inner ear"
/clone_lib="RIXEM full-length enriched, adult inner ear"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="F930026J20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tow.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                 78.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 302; DB 13;
Pred. No. 2.2e-82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shiraki, T., Waki, K., Kawai, J., Aizawa, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 365;
                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

밁

144 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC

```
RESULT 14
BQ567343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ567343

604 bp mRNA linear EST 19-JUN-200: gi88d08.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi88d08 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 88 row: d column: 08
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ567343.1 GI:21470660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCC 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cccagcaactregreaaggagcagcgrerataccaggaggcc 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTGGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            musculus (house mouse)
/ Nex = main terms 16
/ dev stage="most natal day 5 to 13"
/ dev stage="most natal day 5 to 13"
/ clone lib="Mouse Organ of Corti; Vector: pBluescript"
/ note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcriptase
(MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="gi88d08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 19-JUN-2002
```

ORIGIN BASE COUNT

> 178 DNA was blunt ended with PFU DNA polymerase, ligated with ECOR I adapters in the presence of ligase and digested with Xho I. The CDNA was sequentially size fractionated over pharmacia size sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp. respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with ECOR I and Xho I. The phagenid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert's (TM) plasmid purification kit (Invitrogen, carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTMTGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 108 c 152 g 166 t synthesized with DNA polymerase and RNase H. Complementary

밁 Ş 밁 S 밁 Ś 밁 Best Local Similarity Query Match 241 CGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGACTTCTTCTGTGAA 300 325 CGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACCACGGATATTGACTTCTTCTGTGAA 384 181 GACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTTGGTGAAGGAGCAG 240 121 TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGGGCTGGCAGTGTTTATGGT 180 145 GACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTT 204 265 GACCACCAGGATGAGATGGGAATTGTGGGTTATTTCCCCAGCAACTTGGTTAGAGAGCAA 324 205 TATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGT 264 281; 61 GATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTT 120 85 AAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAA 144 1 AAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAA 60 Conservative 70.2%; 0; Score 269.6; DB 13; Length 604; Pred. No. 3.2e-72; Mismatches 19; Indels 0 Gaps

BQ568785

ACCESSION VERSION SOURCE DEFINITION KEYWORDS 280 bp mRNA linear EST 19-JUN-2002 gill4f04.y2 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gill4f04 5', mRNA sequence. BQ568785.1

ORGANISM Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. Mus musculus (house mouse)

GI:21472102

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 114 row: f column: 04
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 280)
library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dr) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMILVER) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Upsaala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp. respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XII Blue MRF cells, the yield of the phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of seturated culture with the carisbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal MI3 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cervical dislocation followed by decapitation, the bulla was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/clone_Torgan: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Socation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
/clone="gil14f04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Deafness and other Communication Disorders
```

BASE COUNT Best Local Query Match 141 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 200 261 TTTTGGGCTGGCAGTGTTTA 280 201 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 260 81 GTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 140 61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGGGGCAGATGAGGAGTGTGTCTATACC 120 21 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCCGGGCATGGT 80 243; 1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60 Similarity AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGCCGCA 240 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180 TTCTGGGCTGGCAGTGTTTA 260 Conservative city, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."

12% are uncharacterized ESTs and 20% are unidentified." sequencers using POPS polymer (Applied Biosystems, 60.6%; 0 Score 232.8; DB Pred. No. 5e-61; Mismatches DB 13; 17; Indels Length 280; 0 Foster

Job time : 1279.36 secs Search completed: December 30, 2003, 06:07:17 Ş 밁 Ś 밁 Ş 맑 Ş 밁

```
Minimum
Maximum
                                                                                                                                                                                                                                     Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                  No.
                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BG 8G
384
344
344
330
294.8
287.6
285.4
                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0 seq length: 2000000000
  100.0
89.6
89.6
85.9
74.9
74.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-46
384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December 29, 2003, 22:01:01; Search time 127.462 Seconds (without alignments) 8132.484 Million cell updates/sec
                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 atggcaagaatattgattct.....atattgacttcttctgtgaa 384
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2552756 seqs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                  3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
7: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
8: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
10: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
10: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
11: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
12: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
13: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
14: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
15: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
16: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
17: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
18: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _Geneseq_19Jun03:*
_/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
                                                                                                                                                                                                                  Length DB
                                            384
384
947
330
330
307
  H
                                                                                                                 AAF59068
AAF59084
                                                                                                                                                                   AAF59098
                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5105512
                                                                                                                                                                                                               Description
                                                                                                               Mouse MLP nucleoti
Mouse MLP nucleoti
                                                                                                                                                                Rat MLP nucleotide
```

		00 00	
444 443 544 544	0 C C C C C C C C C C C C C C C C C C C	19 20 21 22 23 23 24 25 26 27	9 10 11 12 13 13 14 14 15 16
47.2 47.2 47.2 47.2 47.2	44444444444444444444444444444444444444		2000 2000 2000 2000 2000 2000 2000 200
88888			444444404
1060 1060 1060 1061		0 4 4 4 70 C 4 4 4 C 8 8 C 70 70 70 70 70 70 70 70 70 70 70 70 70	521 521 521 891 923 1201 330
8 8 8 8 8 8 8 5 5 5 5 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100 100 100 100 100 100 100 100 100 100	222222222222222222222222222222222222222
ABX78808 ABX75821 ABX77026 ABX16866 ABX16866 AAS46205	245878088888888888 14769844489808 46648888866	4640000404	9009
Human PRO polynucl Human cDNA encodin Human PRO polynucl Human cDNA encodin Human DNA encoding	PRO19670 cD cDNA encodi angiogenesi angiogenesi pRO19670 cD pRO19670 cD pRO19670 cD pRO19670 cD pRO19670 cD pRO19670 cD pRO19670 cD pRO19700 pRO 1	nce encodi binant hun nce encodi oma inhib; antisense prostate prostate cancer i t cancer i	Human growth regul Human angiogenesis Human pRO9873 cDNA cDNA encoding huma Human EST-derived Human growth regul Human growth regul Human growth regul Human growth regul

ALIGNMENTS

RESULT 1

23-APR-2001 (first entry)

AAF59098;

AAF59098 standard; DNA;

384 BP.

```
Itoh Y, N
Tanaka H;
                                                                                                                                                           MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                              30-JUN-1999;
                                                                                                 11-JAN-2001.
                                                                                                                                    Rattus sp.
                                                                                                                                                                                                 Rat MLP nucleotide sequence SEQ ID NO:46.
                                                                               29-JUN-2000; 2000WO-JP04278
                                                                                                                   WO200102564-A1.
                                                                                                                                                     inhibitor;
                                            (TAKE ) TAKEDA CHEM IND LTD.
                          Nishi K, Ogi K,
                                                               99JP-0186718
                           Ohkubo
                           Ś
                          Mogi
                           Ś
                          Noguchi Y,
                          Yoshimura K;
```

AAF59093 AAF59065 AAS17583 AAF59099 AAF59080

Rat MLP nucleotide Human MLP nucleoti DNA encoding novel

WPI; 2001-159271/16.

Rat MLP nucleotide Mouse MLP nucleoti

```
ARESULT 2
ARESONE
ID AARES
XX AAFES
XX AAFES
XX AAFES
XX MILP;
XX MILP;
XX MILP;
XX MILP;
XX Inhi
XX Inhi
XX MILS
XX MILS
XX MILS
XX MILS
XX MILS
XX Inhi
XX Inhi
XX MILS
XX MILS
XX MILS
XX MILS
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XXGGGGGGGGGGGGAX8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint disease as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 384 BP; 98 A; 72 C; 109 G; 105 T; 0 other;
                                                                                                                                                                                                                                                MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 13; Page 105-106; llipp; Japanese.
                                                                            WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                          Mouse MLP nucleotide sequence SEQ ID NO:10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF59068 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in the exemplification of the present invention.
                                                                                                                                              musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCCTCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
nilarity 100.0%;
Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 384; DB 22;
Pred. No. 3.2e-118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

BXAXAXU

AAF59084 standard; DNA; 947

23-APR-2001 Mouse MLP nu

MLP nucleotide sequence

SEQ

ID NO:30

(first entry)

```
S
                                          밁
                                                                          Ś
                                                                                                               밁
                                                                                                                                               S
                                                                                                                                                                                      밁
                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        promoters and inhibitors for preventing or treating e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 384 BP; 98 A; 68 C; 111 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; Page 93; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAB69125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-159271/16.
       361
                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                      181
                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                          121 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC
                                                                                                                                                                                                                                                                                                                                   61 GTATTTATGGATAAACTTTCTTATGAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                         61 ATGITTTATGGATAAACTITTCTTAGGAAGITGTGTGTGGAGATGAGGAGTGTGTGTTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                              1 ATGGCAAGAATATTGATTTTTTGCTTGGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nishi K,
                                                                                                                                                                                                              AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT
       ACGGATATTGACTTCTTCTGTGAA 384
                                        CCCAGCAACTTGGTGAAGGAGCAGCCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                              CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                  TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                              ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                       AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 344; DB 22;
Pred. No. 8.1e-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 22; Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Noguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            joint
                                                                                                                                                                                         240
```

```
밁
                              Ş
                                                                 밁
                                                                                                Ś
                                                                                                                                   멍
                                                                                                                                                                 Ś
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 359; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 947 BP; 279 A; 158 C; 221 G; 289 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 2; Page 100-101; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
371
                                 361
                                                                                                 301
                                                                                                                                   251
                                                                                                                                                                       241
                                                                                                                                                                                                        191
                                                                                                                                                                                                                                                                         131
                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                              71
                                                                                                                                                                                                                                                                                                                                                                 61 ATGITTATGGATAAACTITCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nishi K,
                   ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCCGGGCATGGC
ACGGATATTGACTTCTTCTGTGAA 394
                                                                                          TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                       AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 250
                                                                                                                                                                                                                                                                         ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC
                                                                                                                                                                                                                                                                                                          ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                            GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTTATACT 130
                                                                   CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGÄTCCCAACC
                                                                                                                                   TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 310
                                                                                                                                                                                                                                       AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCCGGGCATGGT 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 344; DB 22; Length 947; Pred. No. 1.3e-104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mogi s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                   370
```

```
RESULT 4
AAF59099
ID AAF5
XX AAF5
AC AAF5
XX AAF5
XX AAF5
XX AAF5
XX MLP;
XX MLP;
XX MLP;
XX MID;
XX MID;
XX MO20
XX Inhi
XX MO20
XX Inhi
XX MO20
XX Inhi
XX MO20
XX Inhi
XX MO20
XX Inhi
XX MO20
XX Inhi
XX MO20
XX Inhi
XX MO20
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX I
      밁
                                                                S
                                                                                                                                     밁
                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 330 BP; 91 A; 62 C; 91 G; 86 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 12; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; AAB69131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rat MLP nucleotide sequence SEQ ID NO:48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF59099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF59099 standard; DNA; 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oint disease; pathologic angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                     121
                                                                                                                                                                          175 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-159271/16
                                                                                                                                                                                                                                                                                                                                115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 174
                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                       55 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                 1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                        GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nishi K,
                                                                                                                                 AATGTCAAGAAAGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                   TATACCATTTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
GGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ogi K, Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85.9%; Score 330; DB 22; 100.0%; Pred. No. 3.7e-100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      명
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mogi s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.
                                                                                                                                                                                               234
```

Ś

295

TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT

354

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
             Ş
                                            밁
                                                                      Ś
                                                                                                   В
                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                            Matches
                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                            The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB59122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouse MLP nucleotide sequence SEQ ID NO:25.
                                                                                                                                                                                                                      Sequence 330 BP; 91 A; 60 C; 92 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                  Claim 10; Page 98; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                            promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                             encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB; AAB69127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59080 standard; DNA; 330 BP
                                                                                                                                                                                                                                                  in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
               175
                                                                       115
                                                                                                                                                              308;
                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                          low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                 55
                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAACCACGGATATIGACTICTICTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAACCACGGATATTGACTTCTTCTGTGAA 330
               AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                       TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 174
                                             TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                    CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ogi ĸ,
                                                                                                                                                                         76.8%;
93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ohkubo S,
                                                                                                                                                              0
                                                                                                                                                                            Score 294.8; DB 2
Pred. No. 2.3e-88;
                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mogi S,
                                                                                                                                                                                        DB 22;
                                                                                                                                                              22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Noguchi Y,
                                                                                                                                                            Indels
                                                                                                                                                                                        Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yoshimura K;
                                                                                                                                                            .
.
                                                                                                                                                                                                                                                                                                                                                                                                                              joint
                                                                                                    60
                                                                                                                                                              0
```

밁 S

Query Match Best Local (Matches

301;

Conservative

0

Indels Length 307;

1;

Gaps

Similarity

98.4%; 74.98;

Score 287.6; DB 22; Pred. No. 5.7e-86; Mismatches

49 GCCGGGCATGCTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAG 108

GCCGGCATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAG

60

```
AAF59093

XXX

XXX

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

DT 23.-

EXX W 11.-

DT 29.-

DT 11.-

DT 29.-

DT 11.-

DT 29.-

DT 29.-

DT 30.-

DT Tar

DT Tar

DT Tar

DT Tar

DT Tar

DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT Tar

DT DT CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTh

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

CCC DTH

C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                     the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                              The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, it is a few of the MLP proteins and DNAs can be used in drugs, it is a few of the MLP proteins and DNAs can be used in drugs, it is a few of the MLP proteins and DNAs can be used in drugs, it is a few of the MLP proteins and DNAs can be used in drugs, it is a few of the MLP proteins and DNAs can be used in drugs, it is a few of the MLP proteins and DNAs can be used in drugs, it is a few of the MLP proteins and DNAs can be used in drugs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rat MLP nucleotide sequence SEQ ID NO:41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59093 standard;
    Sequence 307 BP; 84 A; 56 C; 90 G; 77 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 9; Page 104; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2001
                                                                                    in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ohkubo S, Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
```

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                        The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB59122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
                                in the exemplification of the present invention.
                                                                                                                                                                      Example 1; Page 91; 111pp; Japanese.
                                                                                                                                                                                                                  Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                   Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                               30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human MLP nucleotide sequence SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF59065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF59065 standard; DNA; 384 BP
                                                                                                                                                                                                                                                                                                                                                                               (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                       PSDB; AAB69123
                                                                                                                                                                                                                                                                                                  2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 GGAGAT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 TGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGG 120
                                                                                                                                                                                                                                                                                                                                                Nishi K, Ogi K, Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCACGATGAGATGGGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAAT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGG 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAT 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGGTTATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGA-GGCCACCAA 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGGTTATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTATACCAGGAGGGCCACCAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                              99JP-0186718
                                                                                                                                                                                                                                                                                                                                                Mogi S,
                                                                                                                                                                                                                                                                                                                                                Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                 Yoshimura
                                                                                                                                                                                                                     joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
```

Query Match

Sequence 384 BP;

99

A; 70 C; 74.38;

106 G; 109 T; 0 other;

Score 285.4;

DB 22;

Length 384;

```
RESULT 8
AAS17583
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                    Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease; respiratory disease; renal; gastrointestinal; ss.
                          WPI; 2002-061975/08
                                                      Agarwal P,
                                                                                                                          13-APR-2000;
24-APR-2000;
                                                                                                                                                                    11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                 25-OCT-2001
                                                                                                                                                                                                                          WO200179454-A1.
                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA encoding novel secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS17583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC
                                                                                 SMITHKLINE BEECHAM CORP. SMITHKLINE BEECHAM PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; cDNA; 387 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGATATTGACTTCTTCTGCGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                     Murdoch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                          2000US-196603P.
2000US-199417P.
                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                      /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84.1%;
                                                                                                                                                                                                                                                      "Human secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 3.5e-85;
0; Mismatches 61;
                                                     Smith RF,
                                                   Xiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
AAH26341
ID AAH2
XX
AC AAH2
XX
AC AAH2
XX
DT 02-C
XX
DT 02-C
XX
XX
XX
KW Grow
KW Grow
KW neur
KW neur
KW ss.
XX
XX
XX
XX
XX
AC
OS Homco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, or gastrointestinal diseases. These may also be used to treat diseases, abnormalities and diseases. These may also be used to treat diseases, abnormalities and diseases. These may also be used to expression, production, function and/or metabolism of the genes, as vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polymerbides, and in tissue expression studies. The present sequence represents the coding sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to an isolated novel secreted polypeptide (I) and polynucleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, neurological and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 2; Page 44; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 387 BP; 101 A; 70 C; 106 G; 110 T; 0 other;
                                                                                                                                                                                                                                                                           AAH26341 standard; cDNA; 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.3%;
Similarity 84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCAAGAATATTGATTCTTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                          ACGGATATTGACTTCTTCTGCGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 285.4; DB 2
Pred. No. 3.5e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 24; Length 387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;

Ş 밁 Ş 밁 Ş 밁 S 밁

TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300

AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240

121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180

ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT

ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 138

Matches 322; Query Match Best Local :

Conservative

0; Mismatches

61; Indels

0

Gaps

Similarity

74.3%; 84.1%;

Score 285.4; DB 22; Length 426; Pred. No. 3.7e-85;

Human growth regulatory-like polypeptide clone 16372272.

(first entry)

Homo sapiens

```
CC signature analysis, and Sanger sequencing techniques. This CC expressed sequence tag was used in the assembly of a full-length CC cDNA sequence (see AAH26343) encoding a novel human growth CC regulatory-like polypeptide (GRLP, see AAH2671). The GRLP CC growth factors, human melanoma derived growth regulatory proteins CC growth factors, human melanoma derived growth regulatory proteins CC growth factors acids and 45% identity over 111 amino acids) CC or melanoma inhibitory activity, cattle cartilage-derived cretinoic acid sensitive protein (CD-RAP, 44% identity and 64% complete acids and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention CC can be used in the prophylaxis, treatment (including gene therapy) CC and diagnosis of disorders and diseases caused by, or involving, CC cartilage development and maintenance, inhibition of melanoma cell CC growth and tumours, including neuroectodermal tumours such as CC gliomas. The polynucleotides can also be used to design probes CC nentifieds—incleic acid melanome and reperation of antisense, ribozyme and CC nentified—incleic acid melanome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence is that of Hyseq clone identification number 16372272, which was obtained from a human thymus cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mize NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-JAN-2001; 2001WO-US02455
Sequence 426 BP; 119 A; 73 C; 113 G; 120 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 114; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200155332-A2
                                                                                 peptide-nucleic acid molecules, and to produce transgenic animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           flanking the inserts, sequencing by hybridisation sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        using standard PCR with primers specific for vector sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tang
```

```
RESULT 10
ABL95740
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                    18-SEP-2000
24-OCT-2000
08-NOV-2000
10-NOV-2000
11-DEC-2000
20-DEC-2000
20-DEC-2001
28-FEB-2001
28-FEB-2001
11-MAR-2001
11-MAR-2001
11-MAR-2001
11-MAR-2001
11-MAY-2001
110-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                     28-JUL-2000;
02-AUG-2000;
17-AUG-2000;
23-AUG-2000;
24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
                                                                                                                                                                                                                                                                                                                                                              15-SEP-2000;
18-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antiarteriosclerotic; gene; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human angiogenesis related cDNA PRO9873 SEQ ID NO: 359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABL95740;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABL95740 standard; cDNA;
(GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
GENENTECH INC. BAKER K P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGGATATTGACTTCTTCTGCGA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 378
                                 2000WO-US32678

2000WS-US34956

2001US-076769

2001US-0796498

2001US-0796498

2001US-0806666

2001US-0802706

2001US-0802706

2001US-081674

2001US-081674

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0854208

2001US-0856034

2001US-0870574
                                                                                                                                                                                                                                                                                                2000US-0665350.
2000US-242922P.
2000US-0709238.
2000WO-US30952.
2000WO-US30873.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001WO-US21735
                                                                                                                                                                                                                                                                                                                                                              2000US-0664610
                                                                                                                                                                                                                                                                                                                                                                            2000US-000000P
                                                                                                                                                                                                                                                                                                                                                                                       2000US-230978P
                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US23328
                                                                                                                                                                                                                                                                                                                                                                                                                             200005-0643657
                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US20710.
2000US-222695P.
                                                                                                                                                                                                                                                                                                                                                                                                               2000WO-US23522
```

```
S
                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                               밁
                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $\times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker KP, Ferrara N, Ger
Godowski PJ, Gurney AL,
Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Fig 359; 567pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-171999/22.
P-PSDB; ABB95602.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GURN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (FERR/)
(GERB/)
(GERR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (WATA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GODD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOOD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAON/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PANJ/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MARS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
398
                                                                                                                                                                     301
                                                         361
                                                                                                                                                                                                                                  278
                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>-</u>ــر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GURNEY A L.
HILLAN K J.
MARSTERS S A.
PAN J.
PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 74.3%;
Similarity 84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GODOWSKI P J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GODDARD A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GERRITSEN M E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GERBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FERRARA N.
                           ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                             CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                      TTCTGGGCTGGCAGTGTTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                  AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGITTATGGATAAACTITCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                              AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGIC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence is a coding sequence of the invention.
                                                                                                            CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                               TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerber H, Gerrite
L, Hillan KJ, Man
CK, Williams PM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 285.4; DB Pred. No. 4e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerritsen ME, Goddard
KJ, Marsters SA, Pan
ms PM, Wood WI, Ye W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Paoni NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
Baker KP, re-
                                                                                                                                                      05-APR-2001;
10-MAY-2001;
10-MAY-2001;
10-MAY-2001;
25-MAY-2001;
25-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; prO agonist; prO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; carcer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophiebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
                            WPI; 2002-090516/12.
P-PSDB; ABB84996.
                                                                                                                                                                                                                                            09-MAR-2001
                                                                                                                                                                                                                                                                          22-JAN-2001;
28-FEB-2001;
                                                                                                                                                                                                                                                                                                                    10-NOV-2000,
01-DEC-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human PRO9873 cDNA sequence SEQ ID NO:359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABL88251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL88251 standard; cDNA; 521 BP
                                                                                                                                                                                                                                                                                                                                                                                     18-SEP-2000
                                                                                                     (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 healing; chromosome mapping; gene mapping; gene; ss.
                                                                      Ferrara N, G
J, Gurney AL,
                                                                                                                                                                                                                                  2001WO-US06520.
2001WO-US06666.
2001US-0802706.
2001US-0808689.
                                                                                                                                                                                                                                                                                                                                                                      2000US-0643657.
2000WO-US23522.
2000WO-US23328.
2000US-230978P.
2000US-0664610.
2000US-0665350.
                                                                                                                                                                                                                                                                                                                   2000WO-US30952.
2000WO-US30873.
2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-213637P
                                                                                                                          2001WO-US17443
2001WO-US17800
                                                                                                                                               2001US-0870574.
                                                                                                                                                                    2001US-0866034.
                                                                                                                                                                             2001US-0866028
                                                                                                                                                                                         2001US-0854280.
                                                                                                                                                                                                                                                                          2001US-0767609
2001US-0796498
                                                                                                                                                                                                                                                                                               2000US-0747259
2000WO-US34956
                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-220664P
2000WO-US20710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001WO-US19692.
                                                         Gerber H, Gerritsen ME, G
L, Hillan KJ, Marsters SA,
CK, Williams PM, Wood WI,
                                                                   Gerritsen ME, Go
KJ, Marsters SA,
                                                                                Goddard A;
                                                                     Pan J,
```

One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial

WC200208288-A2

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
ABK33571
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CC ABB88072 to ABL88258 encode the PRO proteins given in ABB84817 to CC ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, CC antianglogenic, hypotensive, vulnerary and antiarteriosclerotic cactivities, and can be used in gene therapy. The PRO polynucleotides, CC proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endethelial or angiogenic disorder in a mammal, CC e.g. cardiac hypertrophy, trauma, cancer, age-related macular cegeneration, atherosclerosis, hypertrension, arterial restenosis, CC rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, CC lymphangitis, tumour angiogenesis (such as breast cardinoma and liver CC cardinoma) and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hybridisation probes, and in CC chromosome and gene mapping. AbL88259 to ABL88267 represent primers and CC probes used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                   Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation; tumour necrosis factor-alpha; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; Fig 359; 565pp; English.
                                                                                                                                                                                                              cDNA encoding human PRO protein, Seq ID No 71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        infarction), endothelial or angiogenic disorders in a mammal
                                                                                                                                                                                                                                                                                                                                                 ABK33571 standard; cDNA; 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 285.4; DB Pred. No. 4e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 24; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

240

97

277

337

```
밁
                           Ś
                                                               밁
                                                                                                                                                                                                   OXPXARRARRARRARRARRARRARRARRARXAXIIXARAXEEEEXXXXOOOOOOOOOOOOOOOOOO
                                                                                        Ş
                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                The invention relates to one hundred and twenty two nucleic acids encoding PRO polypeptides. The sequences of the 122 PRO polypnucleotides encode human secreted proteins. The PRO nucleic acids, polypeptides, agonists and antagonists are useful for treating a PRO related disorder. The PRO polypeptides are useful for diagnosing tumours, especially lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour. The PRO polypeptides are useful for stimulating the proliferation of, or gene expression, in pericyte cells, for stimulating the proliferation or differentiation of chondrocyte cells, for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baker KP,
Grimaldi o
                                                                                                                                                                                                                              stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal fibroblast cells. The PRO polypeptide may also be used as molecular weight markers and for tissue typing. The PRO nucleic acids have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABK33536-ABK33657 represent human PRO protein coding sequences of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-NOV-2000;
01-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-SEP-2000;
10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUL-2000;
28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-AUG-2000;
24-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-2001; 2001WO-US21066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 2; Figure 71; 359pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; AAU83627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-DEC-2000;
                                                                                                                                                                                                 Requence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-172001/22.
 98
                                61
                                                                 38
                                                                                                  -
                                                                                                                                                  Similarity
                                                                                                  ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                               ATGITTATGGATAAACITTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                 ATGGCAAGAATATTGTTACTTTTCCTCCGGGTCTTGTGGCTGTATGTGCTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desnoyers L,
C, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-000000P.
2000WO-US30873.
2000US-253646P.
                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US17092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001WO-US06520
2001US-0854280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000WO-US23328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US20710.
2000WO-US23522.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-220664P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-220638P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-220624P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-220607P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-220605P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US34956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0747259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-220893P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-220666P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-220585P
                                                                                                                                               74.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen ME, Goddard A, Godowski PJ;
Smith V, Stephan JF, Watanabe CK, W
                                                                                                                                   0
                                                                                                                                 Pred. No. 4e-85;
); Mismatches
                                                                                                                                                                Score 285.4; DB 24; Length 521;
                                                                                                                                 61;
                                                                                                                                   Indels
                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wood WI;
                                                                   97
                                                                                                                                   0
```

121

ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC

Query Match

Sequence 891 BP; 272 A; 146 C; 214 G; 259 T; 0 other;

74.3%;

Score 285.4;

BB

22; Length 891;

```
RESULT 13
AAH98228
ID AAH98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      η,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
The present invention provides the protein and coding sequences of novel proteins from a variety of organisms, including human, dog, cat, horse, cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (ESTs) from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess biodiversity and for nutritional purposes. The present sequence is a cDNA
                                                                                                                                                                                                                                                                                               Tang
                                                                                                                                                                                                                                                                                                                                                          25-JAN-2000; 2000US-0491404
17-JUL-2000; 2000US-0617746
03-AUG-2000; 2000US-0631451
15-SEP-2000; 2000US-0663870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tomato; monkey; dog; sea urchin; expressed sequence tag; ES diagnostics; forensic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH98228 standard; cDNA; 891 BP
                                                                                                                                                             Claim 1; Page 236; 1275pp; English.
                                                                                                                                                                                           Isolated polypeptide for treatment of diseases, diagnostics, raising antibodies and research use -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; sheep; pig; cow; fruit fly; yeast; hamster; macaque;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human EST-derived coding sequence SEQ ID NO: 85.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH98228;
                             of the invention.
                                                                                                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                    25-JAN-2001; 2001WO-US02687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200154477-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                      P-PSDB; AAM23569
                                                                                                                                                                                                                                                                                                                              (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                 YT,
                                                                                                                                                                                                                                                      2001-476164/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158
                                                                                                                                                                                                                                                                                   Drmanac RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                 Zhou P,
A, Zhang
                                                                                                                                                                                                                                                                                   Qian XB, Wang Z, J, Werhman T;
                                                                                                                                                                                                                                                                                                 Chen R,
                                                                                                                                                                                                                                                                                                  Asundi V;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337
```

```
RESULT 14
AAH26342
\begin{array}{c} \mathsf{CCC} \times \mathsf{px} \\ \mathsf{CCC} \times \mathsf{px} \\ \mathsf{CCC} \end{array}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                        Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                25-JAN-2000; 2000US-0491404.
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human growth regulatory-like polypeptide partial cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAH26342 standard; cDNA; 891 BP
                                           Claim 1; Page 115; 119pp; English.
                                                                                                                                                      WPI; 2001-483233/52.
                                                                                                                                                                                   Drmanac RT;
                                                                                                                                                                                                                                                                                                               25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                              02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                           WO200155332-A2.
                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                   (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19 ATGCCAACAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AIGITTATGGATAAACITTCTTCTAAGAAGITGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGCGA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCCACC 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTGGGCTGGCAGTGTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC 318
                                                                                                                                                                                                   Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.1%;
                                                                                                                                                                                                    Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 5.2e-85; 0; Mismatches 61
                                                                                                                                                                                                    Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61;
                                                                                                                                                                                                   Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

The present sequence is that of a novel nucleic acid that was assembled from human thymus cDNA library-derived Hyseq clone

Homo sapiens.

```
AAF59083
ID AAF59083
XX AAF59
XX AAF59
XX AAF59
XX AAF59
XX AAF59
XX AAF59
DT 23-AF
DT 23-AF
DT 23-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF
DT C3-AF

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  precursor (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle carrilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and primers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       identification number 16372272 (see AAH26341). A recursive algorithm was used to extend the clone by pulling additional sequences from different databases. A full-length sequence (see AAH26343) encoding novel human growth regulatory-like polypeptide (GRLP, see AAB82671) was subsequently obtained. Human GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein
                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                           23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF59083 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 891 BP; 272 A; 146 C; 214 G; 259 T; 0 other;
                                                                                                                                                                                                                                                                                                  Human MLP nucleotide sequence SEQ ID NO:29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide-nucleic acid molecules, and to produce transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 СССАВСААСТТВЕТТАВАВАВСЕЛАСВАВТВТАССАВВАВСЕСАССАЛЕВАВТТССАЛСС 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19 ATGGCAAGAATATTGTTACTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGCAAGAATATTGATTCTTTTGCTTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74.3%;
84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 285.4; DB 2
Pred. No. 5.2e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
밁
                                                                                                   Ś
                                                                                                                                           밁
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                            $
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 74.3%; Score 285.4; DB 22; Length 923; Best Local Similarity 84.1%; Pred. No. 5.3e-85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 923 BP; 303 A; 147 C; 213 G; 260 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 99-100; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200102564-A1
394
                                                                      334
                                                                                                           301
                                                                                                                                               274
                                                                                                                                                                                                                      214
                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                             154
                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                          13
                                                                                                                                                                                                                                                                                                                                                                                                                                              34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ATGGCAAGAATATTGATTCTTTTGCTTTGGGGGCCTTTGTGGCTCTTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nishi K,
                     ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                           ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                        CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 393
                                                                                                   CCCAGCAACTTGGTTAGAGAGCAACGAGGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                               TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC 333
                                                                                                                                                                                                                                                        AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                               ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 213
                                                                                                                                                                                                                                                                                                                                                                       ATATTTATEGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 153
                                                                                                                                                                                                                                                                                                                                                                                                            ATGTTTATGGATAAACTTTCTTATAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA 93
 ACGGATATTGACTTCTTCTGCGA 416
                                                                                                                                                                    TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                      AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ohkubo S, Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

Search completed: December 30, 2003, 02:14:34 Job time: 128.462 secs

```
Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December 30, 2003, 04:08:13 ; Search time 315.339 Seconds (without alignments)
4172.254 Million cell updates/sec
                                10:
12:
13:
14:
15:
16:
18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2244575 segs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 atggcaagaatattgattct.....atattgacttcttctgtgaa 384
. (cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/POT_NEW_PUB.seq:*
. (cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
. (cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
. (cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
. (cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
. (cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
. (cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
. (cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US1A_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US1A_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US1A_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US1A_PUBCOMB.seq:*
. (cgn2_6/ptodata/1/pubpna/US1A_PUBCOMB.seq:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Published_Applications_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

15	14	13	12	11	10	9	œ	7	თ	S	4	ω	2	_	Result
285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	285.4	Score
74.3	74.3	74.3	74.3		74.3		74.3	74.3	74.3	74.3	74.3	74.3		74.3	Query Match
521	521	521	521	521	521	521	521	521	521	521	521	521	521	426	Length
13	13	13	13	13	ü	13	13	13	٦ د	13	13	13	13	15	BB
US-10-219-530-71	US-10-219-526-71	US-10-219-525-71	US-10-219-483-71	US-10-219-480-71	US-10-219-475-71	US-10-219-073-71	US-10-219-069-71	US-10-219-068-71	US-10-219-067-71	US-10-219-066-71	US-10-219-063-71	US-10-218-765-71	US-10-216-163-71	US-10-216-038-1	H D
Sequence 71, Appl	Sequence 71, Appl	Sequence 71, Appl	Sequence 71, Appl	Sequence 71, Appl	Sequence 71, Appl	Sequence 71, Appl	`	Sequence 71, Appl	•	Sequence 71, Appl	Sequence 71, Appl	Sequence 71, Appl	Sequence 71, Appl	Sequence 1, Appli	Description

4 .	44	43	42	41	40	9	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	ď
85	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	285.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	85.	ů.
					4.					4.		4.	_	_	4.	4	4	4.	4	_	_	4.			4.				
																74.3						•		•	•	•	•	•	•
•			_			_																							
521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	521	170
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	13	13	13	13	13	13	Ļ
	•	٠	•		US-	1	1	•		-Sn			-Sn	•	٠	us-	1	•	us-	US-		7	US-	us-	us-	us-	1	us-	Ġ
10-	10-	10-	10-	10-	10-2	10-	10-	10-	10-	10-2	10-	10-	10-2	10-	10-	10-2	0	10-2	10-2	10-2	10-2	10-2	9	10-2	0	10-2	0	0	7.01
-61	18-	16-	32-	32-	u	19-	19-	19-	19-	19-0	-61	30-	19-	27-	27-	18-	16-	30-	18-6	9	0	27-8	23-0	32-2	30-4	Ψ	-	19-5	7 2 . 0
-89	56-	-59	33-	31-	60	81-	79-	-99	64-	75-	'n	34-	-9	83 - 7	73-7	849-7	59A-	4	7	8	163-7	4	2	28-	37-	81-3	33-7	32-7	1
7	1	1	ï	ũ	1	ï	ŭ	1	ĭ	ĭ	1	ř	7	7	1	1	71	1	ĭ	ř	تر	1	59	ř	ř	59	-	تر	١
												•																	
Sequ	Sequ	Sequ	Sequ	Sequ	Seque	Sequ	Sequ	Seque	Sequenc	Sequ	Sequ	Sequ	Sequence	Seque	Sequenc	Sequ	Sequ	Sequence	Sequenc	Sequer	Sequenc	Sequenc	Sequ	Seque	Sequ	Sequ	Sequ	Sequenc	200
equence	equence	equence	lence	equence	ence	equence	equence	ence	ence	equence	equence	lence	ence	lence	ence	equence	lence	ence	lence	ence	ence	lence	equence	lence	equence	equence	equence	ence	Jan.
71,				71,	71,											71,					71,			71	71,		7		
ĀPE	App	App	Ąpŗ	App	ĄpĮ	Apı	Apı	App	App	Apı	Apı	Apr	Apı	Apı	Api	App	Apr	Apr	Apr	App	App	Apr			App	•		App	7
ĭ	ĭ	<u>۲</u>	۲,	Ξ.	. <u>۲</u>	ř	ĭ	۲.	· <u>۲</u>	۲,	- 2	۲,	۲,	~	۲.	`~	2	ĭ	۲,	ĭ	, μ	ĭ	ŏ	ĭ	۲,	ŏ	ř	۲,	٠,

ALIGNMENTS

RESULT 1 US-10-216-038-1

7 110	US.	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
Query Match Best Local Similarity Matches 322; Conser	TYPE: DNA TYPE: DNA COGANISM: H FEATURE: FEATURE: NAME/KEY: m LOCATION: (OTHER INFOR	APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: TITLE OF I TITLE OF I TITLE REFER CURRENT FI PRIOR APPL PRIOR APPL PRIOR APPL PRIOR APPL PRIOR APPL PRIOR FILI PRIOR FILI PRIOR FILI PRIOR FILI NUMBER OF SOFTWARE SEQ ID NO 1	GENERAL INFORMATION: APPLICANT: Mize, Nancy K APPLICANT: Mize, Nancy K
atch cal Sim 322;	TYPE: DNA ORGANISM: Homo sapiens FEATURE: FEATURE: MAME/KEY: misc_feature LOCATION: (426)(426) OTHER INFORMATION: n = A, T, G, or C 0-216-038-1	PEGGGGIFFNV	TINFOR
nilari Cons	omo saj isc fea 126)	Ford, John E Ford, John E Arterburn, Matthew Tang, Y Tom Liu, Chenghua Dimanac, Radoje T Song, Yong Sjanatad, Michael INVENTION: Methods an INVENTION: Methods an INVENTION: Mothods an INVENTION: Mothods an INVENTION: Polypepti RENCE: HYS-7CIP POLICATION NUMBER: US DILICATION NUMBER: US OING DATE: 2000-05-02 LICATION NUMBER: US OING DATE: 2000-01-25 SEQ ID NOS: 8 SEQ ID NOS: 8 SEQ ID NOS: 8	No. US2003012 DRMATION: Mize, Nancy K
vat	piens ature (426) : n = 1	John E John E John E Tom nenghu n nenghu nenghu nenghu nenghu nenghu nenghu nenghu nenghu nen	003012
***	. H	Ford, John E Ford, John E Arterburn, Matthew C Tang, Y Tom Liu, Chenghua Drmanac, Radoje T Song, Yong Sjasstad, Michael ENTION: Methods and ENTION: Methods and ENTION UNMBER: US/1 ICATION NUMBER: US/1 NG DATE: 2002-08-08 ATION NUMBER: US 09/ DATE: 2000-05-02 ATION NUMBER: US 09/ DATE: 2000-01-25 Q ID NOS: 8 Q ID NOS: 8	4573A1
Score Pred. 0; Mi	g, Or	C d Mate des an /10/21 9/563, 9/491,	
Score 285.4; DB 1 Pred. No. 2.6e-88; ; Mismatches 61	α	rials Polyn 6,038 786	
Se-S		Relati	
· · ·		ng to	
Length 426 Indels 0		No. C	
0;		JS2003	
Gaps		012457	
0;		3A1e1	
		US20030124573Alel Growth	^

S 망 Ş В

Ş 밁 S 밁 Ś В

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-216-163-71
                                     PRIOR APPLICATION NUMBER: 60/05913
PRIOR APPLICATION NUMBER: 60/05913
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-26
PRIOR PRIOR PRIOR DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 71, Application US/10216163
Publication No. US20030149239A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC FILE REFERENCE: P3530P1C3
FILE REFERENCE: P3530P1C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/216,163
CURRENT FILING DATE: 2002-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 ACGGATATIGACTICTICTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 CCCAGCAACTTGGTTAGAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGATTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 138
Prior Application data removed - SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACGGATATTGACTTCTTCTGCGA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerritsen, Mary
                        See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
```

```
; TYPE: DNA; ORGANISM: Homo Sapien US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                338
                                                                                                                                                                    278
                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                           218
                                                                                                                                                                                                                                                                                                                                               158
398
                                     361
                                                                                                                          301
                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                     121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        322; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                               98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 ATGITTATGGATAAACTITCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.3%;
Similarity 84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                             ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                            AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                             ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
ACGGATATTGACTTCTTCTGCGA 420
                      ACGGATATTGACTTCTTCTGTGA 383
                                                                                CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCCACC 397
                                                                                                                 CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCACCAAGGAGATTCCAACC 360
                                                                                                                                                                    TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                               TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                         AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 285.4; DB 13; Pred. No. 2.9e-88; 0; Mismatches 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                        337
                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                    217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
US-10-218-765-71
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06973
PRIOR APPLICATION NUMBER: 60/06973
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 71, App. Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P9530PLC19
CURRENT APPLICATION NUMBER: US/10/218,765
CURRENT FILING DATE: 2002-08-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerritsen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10218765 to. US20030187201A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mary
```

FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-11 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-15 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-15 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/ FILING DATE: 1998-09-16	APPLICATION PILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION	FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION APPLICATI	FILING DATE: 1998-03-2 APPLICATION NUMBER: 60 FILING DATE: 1998-03-2 APPLICATION NUMBER: 60 FILING DATE: 1998-03-2 APPLICATION NUMBER: 60 FILING DATE: 1998-03-2 APPLICATION NUMBER: 60 FILING DATE: 1998-04-1 APPLICATION NUMBER: 60 FILING DATE: 1998-04-1 APPLICATION NUMBER: 60 FILING DATE: 1998-04-2 APPLICATION NUMBER: 60 FILING DATE: 1998-05-0 APPLICATION NUMBER: 60 FILING DATE: 1998-05-0 APPLICATION NUMBER: 60 FILING DATE: 1998-05-0 APPLICATION NUMBER: 60 FILING DATE: 1998-05-0 APPLICATION NUMBER: 60 APPLICATION NUMBER: 60
APPLICATION NUMBER: 60 FILING DATE: 1999-04-2 APPLICATION NUMBER: 60 FILING DATE: 1999-04-2 APPLICATION NUMBER: 60 FILING DATE: 1999-05-1 APPLICATION NUMBER: 60-2 APPLICATION NUMBER: 60-2 APPLICATION NUMBER: 60 FILING DATE: 1999-06-2 APPLICATION NUMBER: 60 FILING DATE: 1999-06-2 APPLICATION NUMBER: 60 FILING DATE: 1999-06-2 APPLICATION NUMBER: 60	APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION APPLIC	PILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N FILING DATE: APPLICATION N	APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1 APPLICATION NUMBER: FILING DATE: 1998-1

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                      US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                         APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul (
APPLICANT: Grimaldi, J. Chn
APPLICANT: Grimaldi, J. Chn
APPLICANT: Grimaldi, J. Chn
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
                                                                                                                                                                                                                                                              Sequence 71, Application US/10219063 Publication No. US20030187202A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local 9
                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/151733
OR FILING DATE: 1999-08-31
OR APPLICATION NUMBER: 60/164418
OR FILING DATE: 1999-11-09
OR APPLICATION NUMBER: 60/16361
OR FILING DATE: 1999-11-16
OR FILING DATE: 1999-12-07
OR APPLICATION NUMBER: 60/169445
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
OR FILING DATE: 1999-12-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1999-07-28
APPLICATION NUMBER: 60/146963
FILING DATE: 1999-08-03
APPLICATION NUMBER: 60/149320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/145698
FILING DATE: 1999-07-26
APPLICATION NUMBER: 60/146222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1999-08-17
APPLICATION NUMBER: 60/149638
                                                                                                                                                                                                                                                                                                                                                                                                                           398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 CCCAGCAACTTGGTTAGAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 ATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGGACTGTAGGTTCAATGATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 ATGITTATGGATAAACTITCTTCTAAGAAGTTGTGTGGCAGATGAGGAGTGTGTGTTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ა</u>
INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGCCAAGAATATTGATTCTTTTGCTTGGGGGCCCTTGTGGCTCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n 74.3%;
Similarity 84.1%;
             Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F.
Watanabe, Colin L.
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                           ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 285.4; DB 13; Length 521; Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           337
```

```
당
                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA; Homo Sapien US-10-219-063-71
                                        ঠ
                                                                                         밁
                                                                                                                        Ş
                                                                                                                                                                            В
                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C24
CURRENT APPLICATION NUMBER: US/10/219,063
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/069873
FILING DATE: 1997-12-17
                                            361
                                                                                                                                                                                   278
                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                    158
398
                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         322; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                             98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38 ATGGCAAGAATATTGTTACTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGCAAGAATATTGATTCTTTTGCTTTGGGGGCCTTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74.3%;
Similarity 84.1%;
ACGGATATTGACTTCTTCTGCGA 420
                       ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATTAACGTT 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                          CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                                                                                                                                                                                                                                           ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                         CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                          TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                                                                                                                                                                                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                  AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 285.4; DB 13; Length 521; Pred. No. 2.9e-88; 0; Mismatches 61; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                        360
                                                                                                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

; Sequence 71, Application US/10219066 ; Publication No. US20030187203A1 ; GENERAL INFORMATION:

APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mar

US-10-219-066-71

```
Ş
                                                                                                                  밁
                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA; ORGANISM: Homo Sapien US-10-219-066-71
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 10/119/480
PRIOR FILING DATE: 2002-04-09
PRIOR PELLING DATE: 1997-09-17
PRIOR PELLING DATE: 1997-09-17
PRIOR PELLING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR PELLING DATE: 1997-10-28
PRIOR PELLING DATE: 1997-10-28
PRIOR PELLING DATE: 1997-10-31
PRIOR PELLING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR PELLING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR PELLING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR PELLING DATE: 1998-03-26
PRIOR PELLING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR PELLING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 322; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 74.3%;
Best Local Similarity 84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: P3530P1C27
CURRENT APPLICATION NUMBER: US/10/219,066
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
398
                                                           361
                                                                                                                  338
                                                                                                                                                                             301
                                                                                                                                                                                                                                        278
                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                              218
                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGTGAGGAGGAGGAGGAGGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                  ACGGATATTGACTTCTTCTGTGA 383
ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                              CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                   AAGAAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 97
                                                                                                                  CCCAGGAACTIGGICAAGGAACAGCGIGIGIACCAGGAAGCIACCAAGGAAGTICCCACC 397
                                                                                                                                                                                                                                                                                             TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                           AAAAAAGGGCAGCAGCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 217
                                                                                                                                                                                                                                     TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 285.4; DB 13; Length 521; Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches 61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

```
TITLE OF INVENTION: SCRENTED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PLC51
CURRENT APPLICATION NUMBER: U8/10/219,067
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 1907-09-17
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06403
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/07994
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
                                          S
                                                                                                                片
                                                                                                                                                                    Ś
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 71, Application US/10219067 Publication No. US20030187204A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mar APPLICANT: Goddard, Audre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
278
                                                      241
                                                                                                                218
                                                                                                                                                                       181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                          121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                       98
                                                                                                                                                                                                                                                                                                                                                                                  61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 74.3%; Score 285.4; DB 13; Length 521;
Similarity 84.1%; Pred. No. 2.9e-88;
22; Conservative 0; Mismatches 61; Indels 0;
TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGGAGTCGTGGGTTATTTC
                                                TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA
                                                                                                                                                                                                                                                                                                                                                    ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                    Ś
                                                                  밁
                                                                                                         Ş
                                                                                                                                                       밁
                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                   US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/219,068
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
APPLICANT: Grimaldi, J. Ch.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 71, Application US/10219068
Publication No. US20030187205A1
                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 71
                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246\,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH: 521
                                                                                                                                                                                                                                                                 y Match 74.3%;
Local Similarity 84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DR FILING DATE: 1997-12-17

OR APPLICATION NUMBER: 60/078910

DR FILING DATE: 1998-03-20

DR APPLICATION NUMBER: 60/079294

DR FILING DATE: 1998-03-25

DR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/063549
FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      398 ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361 ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                      121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                              322;
                                                                  98
                                                                                                         61
                                                                                                                                                       38
                                                                                                                                                                                1 ATGGCAAGAATAITGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                         ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                       ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F.
Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gerritsen, Mary
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                              0; Mismatches 61; Indels
                                                                                                                                                                                                                                                                 Score 285.4; DB 13; Length 521; Pred. No. 2.9e-88;
                                                                                                                                                                                                                                              0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-069-71
                                                                                    US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 71, App
Publication No.
                                                                                                                                                                         SEQ ID NO 71
Matches 322; Conservative
                    Query Match 74.3%; Score 285.4; DB 13; Length 521; Best Local Similarity 84.1%; Pred. No. 2.9e-88;
                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                         PRIOR FILING DATE: 1998-03-27

Remaining Prior Application data removed - See File Wrapper or PALM
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-1: PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                              PRIOR
                                                                                                    LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                     FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398 ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
Goddwski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAGCAACTTGGTTAGAGAGCGAGCGAGCGAGCGAGGAGGTTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACGGATATIGACTICITCIGIGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCAGGAACTIGGICAAGGAACAGCGIGIGIACCAGGAAGCIACCAAGGAAGTICCCACC 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stephan, Jean-Philippe F. Watanabe, Colin L. Mood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerritsen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219069 to. US20030187206A1
                                                                                                                                                                                                                                                                                                                                                                       1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                  1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mary
                                                                                                                                                                                                                                                                                                                                                                                              60/078910
0; Mismatches
61; Indels
0
Gaps
  0
```

Ś

1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60

```
US-10-219-073-71
                                                                                                                                      PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR PELICNG DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/069113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064973
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 71, Application US/10219073
Publication No. US20030187207A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
           SEQ ID NO 71
LENGTH: 521
                                                          PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C52 CURRENT APPLICATION NUMBER: US/10/219,073 CURRENT FILING DATE: 2002-08-14 CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCAGCAACTTGGTTAGAGAACGAACGAGTGTACCAGGAGGCCACCAACGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rrrredecreseaererrrarecrearesecaesaesaesaesesesesereserrarrre 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAAAAGGGCAGCAGCATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-073-71
CURRENT FILING DATE: 1097-0-17
PRIOR APPLICATION NUMBER: US/10/219,475
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/05287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06349
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/0789294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-219-475-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 71, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530F1C49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 AAGAAAGGGCAGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 ATTTCTCTGGCAAGAGACAGGAAGACTACAATGCCCCGGGACTGTAGGTTCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 ATGITTATGGATAAACTITCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10219475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US20030187208A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74.3%;
84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 285.4; DB 13;
Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 521;
```

397

277

B Ş 밁 Ś 망 S В S 밁 S

Ş

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo Sapien
US-10-219-475-71
CURRENT APPLICATION NUMBER: US/10/219,480
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-219-480-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 322
                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
APPLICANT: Desmoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Goddward, Paul
APPLICANT: Grimaldi, J. Ch
APPLICANT: Gurney, Austin I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 71, Application US/10219480 Publication No. US20030187209A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 603-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                             APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      398 ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361 ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATGGCAAGAATAITGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                          Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                    Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 285.4; DB 13; Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     337
```

RESULT 12 US-10-219-483-71

; Sequence 71, Application US/10219483 ; Publication No. US20030187210A1 ; GENERAL INFORMATION:

APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc

Gerritsen, Mary

APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:

APPLICANT: APPLICANT: APPLICANT:

TI: Goddard, Audrey
TI: Goddwski, Paul J.
TI: Grimaldi, J. Christopher
TI: Gurney, Austin L.
TI: Smith, Victoria
TI: Stephan, Jean-Philippe F.
TI: Stephan, Jean-Philippe F.
TI: Watanabe, Colin L.
TI: Wood, William I.
TI: Wood, William I.
TI: NOSITION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC INVENTION: ACIDS ENCODING THE SAME

```
g
                                                                                                                  Ś
                                                                                                                                                                밁
                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: DNA; ORGANISM: Homo Sapien US-10-219-480-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/063549
FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                    158
                                                                                338
                                                                                                                       301
                                                                                                                                                                278
                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                           181
                                      361
                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322;
                                                                                                                                                                                                                                                                                                                                                                                                                        98
                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ч
                                ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                       AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                      ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC
                                                                                  CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                  AAAAAAGGGCAGCAGATCTATGTGTÄCTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                    ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                             ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGITTATGGATAAACTITCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                       TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                    CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74.3%; Score 285.4; DB 13; 84.1%; Pred. No. 2.9e-88; tive 0; Mismatches 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97
                                                                                    397
                                                                                                                                                                    337
                                                                                                                                                                                                                                                      277
                                                                                                                                                                                                                                                                                                                                           217
                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

CURRENT APPLICATION NUMBER: US/10/219,483
CURRENT FILING DATE: 2002-08-13

REFERENCE: P3530P1C43

```
Sequence 71, Application US/10219525
Publication No. US20030187211A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
                                                                                                                                                                       RESULT 13
US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 00/059113
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/079910
PRIOR APPLICATION NUMBER: 60/0799294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGGCA 240
                                                                                                                                                                                                                                                                                                        ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                               CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGGATGGGAGTCGTGGGTTATTTC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 285.4; DB 1
Pred. No. 2.9e-88;
0; Mismatches 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 13; Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
밁
                                                                                             Ś
                                                                                                                                                 밁
                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                 뭥
                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Homo
US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT FILING DATE: US/10/219,525
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR PELICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 521
                                                                                                                                                                                                                                                                                   181 AAGAAAGGGCAGACAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
361 ACGGATATTGACTTCTTCTGTGA 383
                                                                                                                                                                                                                                                                                                                                                                                                     121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 ATGITTATGGATAAACTITCTICTAAGAAGITGTGGCAGATGAGGAGGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGCAAGAATATTGATTCTTTTGCTTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 74.3%;
Similarity 84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F.
                                                                                                                                                                                TTCTGGGCTGGCAGTGTTTATGGTGACCACCACGATGAGATGGGAATTGTGGGTTATTTC 300
                                                                                                CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                      ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                              TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe, Colin
Wood, William I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 285.4; DB 13;
Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                         217
```

```
CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06973
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-219-526-71
                                                                                                                                    Ś
                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-526-71
                                       Ş
                                                                                         밁
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 71, Application US/10219526 Publication No. US20030187212A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Remaining Prior Application NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                          241
                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               322;
                                                                                                                                      181 AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                     158 ATTICTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 217
                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                    98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                38 ATGCCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA 97
                                                                                                                                                                                                                                                                                                                                                                                                              1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCCTTGTGGCCTCTGTGCCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                         ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                            TTCTGGGCTGGCAGTGTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                                                                     ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
Gerritsen, Mary
TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                            AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application data removed - See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.3%;
84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 285.4; DB 13; Length 521; Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
  337
                                                                                              277
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-219-530-71
                                        Ś
                                                                                       묽
                                                                                                                             Ś
                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo Sapien US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR TILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079295
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 71, App. Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: 9353091C54
CURRENT APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1997-10-3
                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                              Local Similarity 84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         338 ccchagahactragatchhagahhchagaratatatahchhagahhactracchhagahhactracchacc 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 ACGGATATTGACTTCTTCTGTGA 383
                                                                                       98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                               38 ATGCCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 97
                                                                                                                                                                                                              1 ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGATATTGACTTCTTCTGCGA 420
ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                 ATTTCTCTGGCAAGAGCACGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                               ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10219530
                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US20030187213A1
                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                   Score 285.4; DB 13; Length Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                              61; Indels
                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                  0
```

밁

158

Searc Job t	Db Qy	d Að	dg VQ	å å
Search completed: December 30, 2003, 10:03:03 Job time : 315.339 secs	361 ACGGATATTGACTTCTTCTGTGA 383	301 CCCAGCAACTTGGTTAGAGAGCAACGAGGTGTACCAGGAGGCCACCAAGGAGATTCCCAACC 360	241 TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC 300	181 AAGAAAGGGCAGGAGCTGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
     pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                           seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         December 30, 2003, 01:34:27; Search time 31.014 Seconds (without alignments) 5464.987 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    569978 segs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 atggcaagaatattgattct.....atattgacttcttctgtgaa 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16.7
16.5
16.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                          \begin{array}{c} 3 \ 5 \ 6 \\ 7 \ 2 \ 1 \ 6 \ 5 \\ 7 \ 2 \ 1 \ 6 \ 5 \\ 7 \ 2 \ 1 \ 6 \ 5 \\ 7 \ 2 \ 1 \ 6 \ 5 \\ 7 \ 3 \ 1 \ 6 \ 5 \\ 7 \ 3 \ 1 \ 6 \ 5 \\ 7 \ 5 \ 6 \ 6 \\ 7 \ 5 \ 6 \ 6 \\ 7 \ 5 \ 6 \ 6 \\ 7 \ 5 \ 6 \ 6 \\ 7 \ 5 \ 6 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 5 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \\ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \\ 7 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \ 6 \ 7 \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
US-08-578-649-4
US-08-578-649-1
US-08-578-649-1
US-08-578-649-24
US-08-578-649-24
US-08-578-649-24
US-08-32-463-1
US-08-33-522A-1
US-09-135-166-1
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-3
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-167-628-1
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
US-08-942-046-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                              Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
                                                                                                                                                                                                         Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                             4 Appli
10 Appli
11 Appli
12 Appli
24 Appli
3 Appli
3 Appli
14 Appli
14 Appli
15 Appli
15 Appli
15 Appli
16 Appli
17 Appli
18 Appli
18 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
19 Appli
                                                                                                                                                                                                         555
                                                                                                                                                                                                                                                                                  Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
```

იი		000	ດດ	n	
4.4	4 4 4 3 2 1 0	9 60	30 U 70 U	3 3 3 1 4 3 2 1	28 29 30
29.2 28.8	29.2 29.2 29.2	29.6	29.6	31.6	31.66
	7.667	7.7	7.8	8886	8 8 8 8 0 0 0 0
1230025 681	591 8789 10136 10136	3505 36138	3169 3505	2998 4214 845	2075 2075 2998 2998
, ru 4,	07 P P A	144	444	பேசமை	ചധധക
US-09-198-452A-1 PCT-US96-10602-13	US-09-107-532A-1482 US-08-328-254-5 US-08-353-700-2 PCT-US95-16216-2	US-08-486-269A-3 US-08-311-731A-136	US-09-620-312D-713 US-07-718-575-3 US-08-481-206-3	US-09-056-704-1 US-09-122-135-1 US-08-998-416-549	US-09-461-688-1 PCT-US96-08140-1 US-09-054-368-1 US-09-054-274-1
Sequence 1, Appli Sequence 13, Appl	Sequence 1402, Ap Sequence 5, Appli Sequence 2, Appli Sequence 2, Appli	μω.	Sequence 713, App Sequence 3, Appli Sequence 3, Appli		Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli

ALIGNMENTS

```
RESULT 1
US-08-578-649-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.:
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
BEGTIFERATION NUMBER: 21 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                       TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                   NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brightte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS;
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 31,575
REFERENCE/FOCKET NUMBER: 30
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOMINION OF TWARE: WORD PATA:
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
FEATURE:
                                                                                                                             MOLECULE TYPE:
               NAME/KEY:
LOCATION:
                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
                                                                                                                                                                                                    581 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                 sig_peptide
                                                                                            Sgo
                                                                        110..499
                                                                                                                                                 linear
                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PC-DOS
                                                                                                                                                                                                                                                                                                                        BOER 1035-PFF/ALT
```

ş

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-578-649-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 174; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                             TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                    FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inc
COMPUTER: IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                             CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                     SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: New York
                                                                                                                                                                                                                                                                FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                    LENGTH:
                                                                                       TELEPHONE:
                                                                                                                                                                                                               APPLICATION NUMBER: DE P 43 24 247.2
                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246 GGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGA---ATTGTGGGTTATTTCCC 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304 GGGCCAAGTGGTGTATGTCTTCTCCAAGTTG-----AAGGGCCGTGGGCGCCTTTTCTG 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186 AGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTG 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244 CATGGCTGTGGCCCTCCAGGACTACGTGGCCCCTGATTGCCGCTTCTTGACTATATAG 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       184 TATGCCCAAGCTGGCTGACTGGAAGCTGTGTGCGGACGAGGAATGCAGCCATCCTATCTC 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303 CAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATTCCAACCAC 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  363 GGATATTGACTTCTTCTG 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66 TATGGATAAACITTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTC 125
                                                                                                                                                                                                                                                                                                                                                                                                             10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAATGGGATTTCTACTG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGTAGCATTGTCCGGGAGGACCTGAACTCGAAACCTGGCAAAATTGATATGAAGACCGA 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGAGGCAGTGTTCAGGGAGGTTACTATGGAGACCTGGCAGCCCGCCTGGGCTATTTCCC
: 459 base pairs
nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mat_peptide
179..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Felfe & Lynch
                                                                                       (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16.7%;
                                                                                                                                                                                                                                                                                                                                                                          inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                           PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24
                                                                                                                                                                                                                                                                                        US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 64; DB 1;
Pred. No. 9.6e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 581;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 18, Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 16.5%;
Best Local Similarity 58.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 153; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: cDNA
                         APPLICATION NUMBER: DE P 43
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: ANdrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOE
                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOM
                                                                                                                                CLASSIFICATION: 435
PRIOR APPLICATION DATA:
          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                 CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                   APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                ZIP:
                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8, Application US/08578649
5770366
                                                                                                                                                                                                                                                                                                                10022
                                                                                                                                                                                                                                                                                                                                                 New York
                                                                                                                                                                                                                                                                                                                                                                                  805 Third Avenue
                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mat_peptide
112..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sig_peptide
40..111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40..432
                                                                                                                                                                                                                                                                           3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                          PC-DOS
                               BOER 1035-PFF/ALT
                                                                                                                     24 247.2
```

```
303 CAGCAACTTGGTTAGAGAGCAAC 325
                                                                                                                                                                                                                                                       186 AGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGGCATTCTG 245
                                                                                                                                                                                                                                                                                                                                 177 CATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCG 236
                                                                                                                                                                                                                                                                                                                                                                                       126 TCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAA 185
                                                                                                                                                                                                                                                                                                                                                                                                                                          117 TATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCACCCTATCTC 176
351 CAGTAGCATTGTCCGAGAGGACC 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGCTATTTCCC 350
                                                                                                                                                               GGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATT---GTGGGTTATTTCCC 302
                                                                                                                                                                                                                  GGGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTG 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 63.4; DB 1;
Pred. No. 1.4e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 459;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

N

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 8, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 152;
COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-Udly-1994
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: DE P 43 24 247.2
APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-Udly-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigttte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (212) 838-388 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                       STREET: BUTTY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_RNA
LOCATION: 4..6
OTHER INFORMATION: /function= "Startcodon Met"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: mat_peptide LOCATION: 7..327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGIH:
                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127 CTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67 ATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1: 330 base pairs
nucleic acid
DEDNESS: single
                                                                                                                                                                                                                                                1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATT---GTGGGTTATTTCCCC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTAGCATTGTCCGAGAGGACC 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAACTTGGTTAGAGAGCAAC 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCCTCGCCTGGGCTATTTCCCCC 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTGG 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGG 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGG 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGCCAAAATTAGCAGATCGTAAATTATGTGCAGATCAGGAGTGCAGCCACCCTATCTCC 72
                                                                                                                                                                                                                                                                                       New York
                                                                                                                                                                                                                                                                                                                              805 Third Avenue
                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                            Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 62.4; DB 1; Length 33 Pred. No. 2.6e-11; o; Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
```

GENERAL INFORMATION:

APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza

TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN NUMBER OF SEQUENCES: 24

CORRESPONDENCE ADDRESS:

CITY: New York STATE: New York

COUNTRY: USA

10022

STREET:

805 Third Avenue

Felfe & Lynch

ADDRESSEE:

COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDGEFECT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION ATA:
PRIOR APPLICATION DATA:
APPLICATION UNMER: DE P 43 24 247.2
FILING DATE: 20-July-1993

COMPUTER READABLE FORM:

MEDIUM TYPE:

3.5 inch 1.44 Mb storage diskette

```
Ś
                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-578-649-8
                                            US-08-578-649-24
                                                                                                                                                                                                                 밁
Patent No.
  Sequence 24, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 141; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (212) 688-920
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                V Match 14.9%; Score 57.4; DB 1; Local Similarity 58.5%; Pred. No. 1.2e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc RNA
LOCATION: join(1..29, 277..305)
OTHER INFORMATION: /function= "Primer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Andrew L. Tiajoloff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                  241 C 241
                                                                                                                                                                            325 C 325
                                                                                                                                                                                                                 181 TACTATGGAGATCTGGTCGCCTGGGCTATTTCCCCAGTAGCATTGTCCGAGAGGAC 240
                                                                                                                                                                                                                                                                                                     127 TCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTGGGGAGGCAGCGTTCAGGGAGAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                   148 TACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTAT 207
                                                                                                                                                                                                                                                             268 CACCAGGATGAGATGGGAATT---GTGGGTTATTTCCCCAGCAACTTGGTTAGAGAGCAA 324
                                                                                                                                                                                                                                                                                                                                             208 TCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGAC 267
                                                                                                                                                                                                                                                                                                                                                                                         67 TACATGGCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88 AAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 AAGTTTTTCGGCGGATCAGGAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCTTCAGGAC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
```

```
RESULT 6
US-08-578-649-3
                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-578-649-24
                                                                                                                                                                                                                                                                       Sequence 3, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (212) 688-926
TELEPAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (211) 688-9200
ZIP: 10022
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: -
LOCATION: one-of(194, 369, 527)
LOCATION: one-of(194, 369, 527)
OTHER INFORMATION: /note= "N in positions 194, 369
OTHER INFORMATION: and 527 denotes an indefinite number and sequence
OTHER INFORMATION: of nucleotides "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                      179 TCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTG 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                            217 CTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCGACTGCCGATTCCTGACCA 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119 CCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATG 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 9.3%; Score 35.6; DB Similarity 60.2%; Pred. No. 0.032;
                                                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                      TTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG 314
                                                                           New York
                                                                                                                805 Third Avenue
                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
549..569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
join(40..111, 40..166, 214..347, 393..503, 549
..569)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
393..503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linea:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                214..347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40..166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                   24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                      Sequence 14, Application US/08232463
Patent No. 5670367
GENERAL INFORMATION:
APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: SCHEIFLINGER, F.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
                                                                                                                                                                                                           US-08-232-463-14/c
```

```
밁
                                                                              Ś
                                                                                                              밁
                                                                                                                                           Ś
                                                                                                                                                                                                                                              US-08-578-649-3
RESULT 7
                                                                                                                                                                              Matches
                                                                                                                                                                                                              Query Match
                                                                                                                                                                                           Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (212) 838-3884 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 29-Jul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE:
                                                                                                                                                                                                                                                         LOCATION: one-of(2216)
OTHER INFORMATION: /note= "N in position 2216
OTHER INFORMATION: denotes an indefinite number ans sequence of
OTHER INFORMATION: nucleotides"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 3565 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                             1589 CTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCCGACTGCCGATTCCTGACCA 1648
                                                1649 TTCACCGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG 1686
                                                                             179 TCAAGAAAGGGCAGCAGCTGTTATTCCAAGCTG 216
                                                                                                                                         119 CCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATG 178
                                                                                                                                                                              59;
                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wordperfect
                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM PS/2
                                                                                                                                                                                                                                                                                                                                                            exon
3232..3252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sig_peptide
1378..1449
                                                                                                                                                                                                                                                                                                            one-of (2216)
                                                                                                                                                                                                                                                                                                                                                                                                           exon
2804..2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1378..1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1586..1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-July-1994
                                                                                                                                                                                          9.3%; Score 35.6; DB 1; 60.2%; Pred. No. 0.07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31,575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ښ</u>
                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                 39; Indels
                                                                                                                                                                                                              Length 3565;
                                                                                                                                                                                 0
                                                                                                                                                                                Gaps
                                                                                                                                                                                   0
```

CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-232-463-14
                                                                                                                                                                                 US-08-433-522A-1
                                                                                                                                                                                                 RESULT 8
                                                                                                                     Sequence 1, Application US/08433522A
Patent No. 6013514
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 3047
TELBCOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
TELEFAX: (703)63-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
APPLICATION NUMBER: EP 91
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
                                                                                          APPLICANT:
       APPLICANT:
                                       APPLICANT:
                                                         APPLICANT:
                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Alexandria
STATE: VA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 8.5%; Score 32.8; DB 1; Length 72
Local Similarity 3.5%; Pred. No. 0.83;
Les 10; Conservative 157; Mismatches 119; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
LICANT: CHONG, Pele
LICANT: THOMAS, Wayne
LICANT: YANG, Yan Ping
LICANT: LOOSMORE, Sheena
LICANT: SIA, Dwo Yuan Charles
LICANT: KLEIN, Michel
LE OF INVENTION: HAEMOPHILUS OUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247 GCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTCCCCAGC 306
                                                                                                                                                                                                                                                                                                                                                                                                                             187 GGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGG 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127 CTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAA 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
                                                                                                                                                                                                                                                                                      307 AACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGA 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67 ATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22313-0299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 7218 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      899149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pTZgpt-F1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
         HAEMOPHILUS OUTER MEMBRANE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP 91 114 300.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 7218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

밁

Ş

밁 Ś

0

```
US-08-433-522A-1
                                                                                                                                                            Matches
                                                                                                                                                                           Query Match 8.5%; Score 32.6; DB Best Local Similarity 55.9%; Pred. No. 0.65;
                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (416) 595-11:
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 12-SEP-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: STEWART, Michael I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/433,522A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                            NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY:
                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
2115 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2165
                                                                             2055 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTGGTACTGGTACTTTTAAGAAG 2114
                                                                                                                  31 GGCCTTGTGGCTCTCTGTGCCGGGCATGGCATGTTTATGGATAAACTTTCTTCTAAGAAG 90
                                                                                                                                                            62;
                                      91 TTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAG 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RY: Canada
M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6TH Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                   2949 base pairs
                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                            75..2465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                       DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                595-1155
                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1038-434 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                   DB 3; Length 2949;
                                                                                                                                                              49;
                                                                                                                                                              Indels
                                                                                                                                                              0
                                                                                                                                                              Gaps
```

```
RESULT 9
US-09-135-166-1
                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09135166 Patent No. 6083743
COUNTY COUNTY COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC compatible
TOWNITER: TOWNEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                              APPLICANT: LOOSMORE, Sheena
APPLICANT: SIA, Dwo Yuan Charles
APPLICANT: KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                 TITLE OF
                                                                                                                         CITY: Toronto
STATE: Ontario
                                                                                                                                                           STREET:
                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                               INVENTION:
                                                                                                                                                                                                                                                                                              CHONG, Pele
THOMAS, Wayne
YANG, Yan Ping
                                                                                                                                                           6TH Floor, 330 University Avenue
                                                                                                                                                                             Sim & McBurney
                                                                                                                                                                                                                               HAEMOPHILUS OUTER MEMBRANE PROTEIN
                                                                                                                                                                                                                 S
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-942-046-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-135-166-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Applic
Patent No. 6264954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: CHONG, Pele
APPLICANT: THOMAS, Wayne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/433,522
FILING DATE: 12-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/433,522
                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: HAEMOPHILUS OUTER MEMBRANE PROTEIN NUMBER OF SEQUENCES: 55
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: YANG, Yan Ping
APPLICANT: LOOSMORE, Sheena
APPLICANT: SIA, Dwo Yuan Charles
APPLICANT: KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS
                                                                                                             SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             y Match 8.5%;
Local Similarity 55.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/09/135,166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: si
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
                                                                                                                                                                                                                         ZIP: MSG 1R7
                                                                                                                                                                                                                                                                                     CITY: Toronto
                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COCATION:
                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2115 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2055 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTGGTACTGGTACTTTTAAGAAG 2114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31 GGCCTTGTGGCTCTCTGTGCCGGGCATGGCATGTTTATGGATAAACTTTCTTCTAAGAAG 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91 TTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAG 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STEWART, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08942046
                                                                                                                                                                                                                                                                 Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2949 base pairs
                                                                                                                                                                                                                                                                                                         6TH Floor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             75..2465
                                                                                                                                                                                                                                                                                                                           Sim & McBurney
12-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          single
                                                                                                                                                                                                                                                                                                           330 University Avenue
                                                                                             US/08/942,046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 32.6; DB 3; Length 2949; Pred. No. 0.65; 0; Mismatches 49; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1038-829 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-942-046-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-433-522A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/433,522A
FILING DATE: 12-SEP-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: STEWART, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-434 MIS:jb
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: STEWART, Michael I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: HAEMOPHILUS OUTER MEMBRANE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                   STATE: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                  STREET: 6TH FU
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                  ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2055 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTACTTGGTACTTTTAAGAAG 2114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2115 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5, Application US/08433522A
o. 6013514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31 GGCCTTGTGGCTCTGTGCCGGGCATGGCATGTTTATGGATAAACTTTCTTCTAAGAAG 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91 TTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAG 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62;
                                                                                                                                                                                                                                                                  M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic acid
                                                                                                                                                                                                                                                                                                       Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2949 base pairs
                                                                                                                                                                                                                                                                                                                                           6TH Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                 YANG, Yan Ping
LOOSMORE, Sheena
SIA, Dwo Yuan Charles
KLEIN, Michel
                                                                                                                                                                                                                                                                                   Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THOMAS, Wayne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHONG, Pele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75..2465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                              Sim & McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yan Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.5%; Score 32.6; DB 3; Length 2949; 55.9%; Pred. No. 0.65;
                                                                                                                                                                                                                                                                                                                                                                                                   ភ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1038-732 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

TELEPHONE: (416) 595-11 TELEFAX: (416) 595-1163 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:

<u>..</u>

(416) 595-1155

LENGTH:

: 2950 base pairs nucleic acid

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
US-09-135-166-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-433-522A-5
US-09-135-166-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Application US/09135166 Patent No. 6083743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: CHONG, Pele
                                                                                                                                                                       TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                  NAME: STEWART, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-829 MIS:jb
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION UNMER: 08/433,522
FILING DATE: 12-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: HAEMOPHILUS OUTER MEMBRANE PROTEIN NUMBER OF SEQUENCES: 55
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                    FEATURE:
                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
LOCATION:
              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                   LENGTH: 2950 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/09/135,166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2374 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2314 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTGGTACTGGTACTTTTAAGAAG 2373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31 GGCCTTGTGGCTCTCTGTGCCGGGCATGGCATGTTTATGGATAAACTTTCTTCTAAGAAG 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91 TTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAG 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THOMAS, Wayne
YANG, Yan Ping
LOOSMORE, Sheena
SIA, Dwo Yuan Charles
KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6TH Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                334..2724
                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sim & McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                  DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55.98;
                                                                                                                                                                           ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           o
;:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 32.6; DB Pred. No. 0.65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3; Length 2950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-942-046-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
밁
                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 5, Application US/08942046 ; Patent No. 6264954
                                                                                                                                             US-08-942-046-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 8.5%;
Best Local Similarity 55.9%;
                                                                      Matches
                                                                                   Query Match 8.5%; Score 32.6; DB 3; Length 2950; Best Local Similarity 55.9%; Pred. No. 0.65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                  TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 2950 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/942,046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: LOOSMORE, Sheena APPLICANT: SIA, Dwo Yuan Charles APPLICANT: KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION: NAME: STEWART, Michael I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: 08/433,522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                            NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                              LENGTH: 2950 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                   STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 24, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2374 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2314 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTGGTACTGGTACTTTTAAGAAG
2314 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTGGTACTGGTACTTTTAAGAAG 2373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31 GGCCTTGTGGCTCTCTGTGCCGGGCATGGCATGTTTATGGATAAACTTTCTTCTAAGAAG 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91 TTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAG 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                 31 GGCCTTGTGGCTCTCTGTGCCGGGCATGCATGTTTATGGATAAACTTTCTTCTAAGAAG 90
                                                                      62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6TH Floor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHONG, Pele
THOMAS, Wayne
YANG, Yan Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Canada
                                                                                                                                                            CDS
334..2724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-SEP-1995
                                                                                                                                                                                                                  DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAEMOPHILUS OUTER MEMBRANE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                 24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                    1038-732 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 32.6; DB Pred. No. 0.65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49; Indels
                                                                      49; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 2950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                      0;
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-433-522A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
                                                                                    RESULT 15
US-09-135-166-3
                                                                                                                                                                                              ş
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                ; NAME/KEY: CDS
; LOCATION: 374
US-08-433-522A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application US/08433522A Patent No. 6013514
                            Sequence 3, Application US/09135166
Patent No. 6083743
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (415) ID NO: 3
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
SEQUENCE C1984 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER FADABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION UMBER: US/08/433,522A

FILING DATE: 12-SEP-1995

CLASSIFICATION: 435

CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: STEWART, Michael I
REGISTRATION NUMBER: 24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: HAEMOPHILUS OUTER MEMBRANE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 61h fr
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2374 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2424
                                                                                                                                                                                                                                    2354 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTGGTACTGGTACTTTTAAGAAG 2413
                                                                                                                                                              2414 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
CANT: CHONG, Pele
                                                                                                                                                                                                                                                                      31 GGCCTTGTGGCTGTGCCGGGCATGGCATGTTTATGGATAAACTTTCTTCTAAGAAG 90
                                                                                                                                                                                                  91
                                                                                                                                                                                                                                                                                                            62; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M5G 1R7
                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAG 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ontario
                                                                                                                                                                                              ттотогоследатодось тотоготогостата статте тепетогосса до 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THOMAS, Wayne
YANG, Yan Ping
LOOSMORE, Sheena
SIA, Dwo Yuan Charles
KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Sim & McBurney 6TH Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (416) 595-1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Canada
CHONG, Pele
THOMAS, Wayne
                                                                                                                                                                                                                                                                                                                                                                                                      374..2764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                          8.5%; Score 32.6; DB 3; Length 2984; 55.9%; Pred. No. 0.65; ative 0; Mismatches 49; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1038-434 MIS:jb
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                   0
```

```
밁
                                                                                            Ş
                                                                                                                                밁
                                                                                                                                                             Ş
                                                                                                                                                                                                                                                             US-09-135-166-3
Search completed: December 30, 2003, 06:10:54 Job time : 33.014 secs
                                                                                                                                                                                              Matches
                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (416) 595-11
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: HAEMOPHILUS OUTER MEMBRANE PROTEIN NUMBER OF SEQUENCES: 55
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION: NAME: STEWART, Michael I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 6TH FI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-829 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/09/135,166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single
                                                                2414 ATAAGTTCTGATGTGATTGGTGGTAATGCAATCGCTACAGCTAGCGCAGAG 2464
                                                                                                                              2354 GGACCTAACGCAATTTATGCCGAATATGGTAATGGTAGTAGTACTTTTTAAGAAG 2413
                                                                                            91 TTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAG 141
                                                                                                                                                             31 сессттелестелетессевскатескательттательная датамисттельновае 90
                                                                                                                                                                                              62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRY: Canada
M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YANG, Yan Ping
LOOSMORE, Sheena
SIA, Dwo Yuan Charles
KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6TH Floor, 330 University Avenue
                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM PC compatible
                                                                                                                                                                                                                                                                               CDS
374..2764
                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sim & McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                                                                                                                                                                               DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PC-DOS/MS-DOS
                                                                                                                                                                                                          8.5%; Score 32.6; DB 3; Length 2984; 55.9%; Pred. No. 0.65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/433,522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                ω
•••
                                                                                                                                                                                                0
                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                  49; Indels
                                                                                                                                                                                                     0
                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                       0
```

۶.

```
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                            Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                  ö
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                             275.5
93.5
91.5
84.5
82.5
                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                73.5
                                                                                                                                                                                                                                           75.5
69.5
69.5
                                                                              70.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         December 29, 2003, 16:03:18; Search time 13.2661 Seconds (without alignments) 927.898 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MARILILLLGGLVALCAGHG......RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-47
676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                283308 seqs, 96168682 residues
                                                                                                                                                                                                                                                                                                                                                            Query
                                                                                                                                                                                                                      11.2
11.1
10.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR_76:*
 10.5
10.5
10.4
10.4
10.4
10.3
                                                                                                                 10.5
                                                                                                                                                 10.7
                                                                                                                                                                        10.8
                                                                                                                                                                                               10.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        pir1: *
pir2: *
pir3: *
pir4: *
                                                                                                                                                                                                                                                                                                                                                  Length DB
                                                                                                                                       844
839
878
1589
413
722
1215
332
1215
695
994
847
520
670
670
                                                                                                                                                                                                                                                                                                                                                    H
                                                        T48525
                                                                                                                                       C81920
A45558
                                                                                                                                                                                    RDLNTZ
                                    B83966
                                                                                S46407
                                                                                            S68178
                                                                                                                 $23589
                                                                                                                                                                 C64427
                                                                                                                                                                                                 A53800
                                                                                                                                                                                                                                               T32734
                                                                                                                                                                                                                                                           G86746
                                                                                                                                                                                                                                                                                 RGBYCE
                                                                                                                                                                                                                                                                                                                            I38019
                                              C90364
                                                                                                                                                                                                                                   T04200
                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                           hypothetical prote
hypothetical prote
epidermal growth f
copper ABC transpo
                                                                                                                                                                                                                        hypothetical prote protein-glutamine
                                                                                                                                                                                                                                                                                                                                                    Description
             enolase-phosphatas
sugar ABC transpor
                                              hypothetical prote
transposase ISC133
                                                          hypothetical
                                                                               mixed-lineage prot
arginine kinase (E
                                                                                                                   connexin 45 -
                                                                                                                                                                            probable signal tr
                                                                                                                                                                                     mixed-lineage prot
dihydrofolate redu
                                                                                                                                                                                                            hypothetical prote
                                                                                                                                                                                                                                   hypothetical
                                                                                                                                                                                                                                              myosin-IA - Acanth
                                                                                                                                                                                                                                                           hypothetical prote
                                                                                                                                                                                                                                                                      transposase homolo
                                                                                                                                                                                                                                                                                  cell division cont
                                                                                                                                                                                                                                                                                          gene VAV2 protein
                                                                                                                                                                                                                                                                                                         transforming prote
                                                                                                                                                                                                                                                                                                                transforming prote
                                                                                                                                                                                                                                                                                                                              melanoma-derived g
  receptor kinase
                                    formate dehydrogen
                                                                     hypothetical prote
                                                                                                       ATP-dependent RNA
```

45	44	43	42	41	40	39	38	37	36	35	34	E E	32	31	30
67.5	67.5	67.5	67.5	67.5	67.5	67.5	68	68	69	68	68.5	68.5	68.5	68.5	69.5
10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.3
506	505	413	343	333	319	93	1084	722	702	373	868	839	727	176	1097
۳	۳	N	N	N	N	N	N	N	N	N	N	N	N	N	N
S24553	S24550	T02693	H86986	A84055	H70420	F84138	T12925	AF1421	A75630	T39655	G71691	G96719	A55628	T18921	T31504
procein-cyrosine v	procern-cyroatne v	S-receptor Killage	DIODADIE HEACTHUR	cranscription regu	conserved hypother	nypothetical proce	ribunucieotide red	Hypotherical memor	ביים ביים ביים ביים ביים ביים ביים ביים	AND COMMENT CONCRETE	The Towns of the contract	probable circuloner	ברמונטומרוכני ווווינינ	٠,	

ALIGNMENTS

RESULT 1

melanoma-derived growth regulatory protein MIA - human
C;Species: Homo sapiens (man)
C;Date: 17-May-1996 #sequence_revision 17-May-1996 #text_change 04-Mar-2000
C;Accession: I38019; S40238
C;Accession: I38019; S40238
A, Bosserhoff, A.K.; Apfel, R.; Behl, C.; Hessdoerfer, B.; Schmitt, A.; Jack
Cancer Res. 54, 5695-5701, 1994
A;Title: Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA.
A;Reference number: I38019; MUID:95007612; PMID:7923218

A;Cross-references: EMBL:X75450; NID:g438057; PIDN:CAA53203.1; PID:g438058

A; Molecule type: mRNA A; Residues: 1-131 < RES>

C; Genetics:

A;Status: preliminary; translated from GB/EMBL/DDBJ

```
RESULT 2
A;Status: not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-844 <COP>
R;Katzav, S.; Cleveland, J.L.; Heslop, H.E.; Pulido, Mol. Cell. Biol. 11, 1912-1920, 1991
                                                                                                                                       transforming protein vav - mouse
C;Species: Mus musculus (house mouse)
C;Date: 03-May-1994 #sequence_revision 16-Feb-1996 #text_change 18-Jun-1999
C;Accession: A61187; A39576; S36941; S23669
R;Coppola, J.; Bryant, S.; Koda, T.; Conway, D.; Barbacid, M.
Cell Growth Differ. 2, 95-105, 1991
A;Title: Mechanism of activation of the vav protooncogene.
A;Reference number: A61187; MUID:91299578; PMID:2069873
A;Accession: A61187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Gene: mia C_1; Superfamily: human melanoma-derived growth regulatory protein MIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    114 ATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60 RFLTIHRGQVVYVFSKL---KGRGRLFWGGSVQGDYYGDLAARLGYFPSSIVREDQTLKP 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56 RFINVKKGQQIYYYSKLVTENGAG-AFWAGSYYGDHQDEMGI-VGYFPSNLVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILILLGGLVALCA--GHGME---MDKLSSKKLCADEECVYTISLARAQEDYNAPDC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MARSIV-CLGVIILLSAFSGPGVRGGPMPKLADRKLCADQECSHPISMAVALQDYMAPDC 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h 40.8%; Score 275.5; DB 2; Length 131; Similarity 44.4%; Pred. No. 3.4e-21; 60; Conservative 27; Mismatches 37; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GKVDVKTDKWDFYCO 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
A;Molecule type: mRNA
A;Residues: 1-323, 'DLLMVPMQRVLKYHLLLQELVK', 346-347, 'QDAT', 352, 'K', 354, 'N', 355-453, 'R', 45
A;Cross-references: EMBL:X64361; NID:g55220; PIDN:CAA45713.1; PID:g55221
R;Adams, J. M.; Houston, H.; Allen, J.; Lints, T.; Harvey, R.
Oncogene 7, 611-618, 1992
A;Title: The hematopoietically expressed vav proto-oncogene shares homology with the dbl
A;Title: The hematopoietically expressed vav proto-oncogene shares homology with the dbl
A;Reference number: S23669; MUID:92228488; PMID:1565462
A;Reference sequence was submitted to Genbank; see S36941
A;Note: the complete sequence was submitted to Genbank; see S36941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:M59833; NID:g202343; PIDN:AAA63402.1; R;Adams, J.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Loss of the amino-terminal helix-loop-helix domain of the vav proto-oncogene ad A;Reference number: A39576; MUID:91172176; PMID:2005887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-28, 'E', 30-93 < KAT>
                                                                                                                                                                                                                                                                                                                                             C;Species: Homo sapiens (man)
C;Date: 31-Mar-1991 #sequence_revision 03-May-1996 #text_change 18-Jun-1999
C;Accession: B39576; S05382
R;Katzav, S; Cleveland, J.L.; Heslop, H.E.; Pulido, D.
Rol. Cell. Biol. 11, 19:2-1920, 1991
A;Title: Loss of the amino-terminal helix-loop-helix domain of the vav proto-oncogene ad A;Reference number: A39576; MUID:91172176; PMID:2005887
A;Accession: B39576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;336-340/Region: proline-rich
F;486-493/Region: nuclear location signal
F;515-563/Domain: protein kinase C zinc-binding repeat homology <KZl>
F;528-548/Region: zinc finger CCCC motif
F;553-566/Region: zinc finger HCCH motif
F;553-586/Region: nuclear location signal
F;604-654/Domain: SH3 homology <SH3A>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Superfamily: vav transforming protein; CDC24 homology; protein kinase C zinc-binding C;Keywords: phosphoprotein; transforming protein; zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: $36941
A; Accession: $36941
A;Cross-references: GB.M59834; NID:g340189; PIDN:AAA63267.1; PID:g340190
A;Note: the authors translated the codon CAA for residue 6 as Glu, CAG for residue R;Katzav, S.; Martin-Zanca, D.; Barbacid, M.

EMBO J. 8, 2283-2290, 1989
A;Title: vav, a novel human oncogene derived from a locus ubiquitously expressed in A;Accession: S05382; MUID:90005432; PMID:2477241
A;Accession: S05382
A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;670-761/Domain: SH2 homology <SH2>
F;788-836/Domain: SH3 homology <SH3B>
F;439/Binding site: phosphate (Ser) (covalent) (by protein kinase A) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;194-458/Domain: CDC24 homology <CD24>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;32-102/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       submitted to the EMBL Data Library, January 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  transforming protein vav - human (fragments) N;Alternate names: finger protein vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;132-176/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAHAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;606-609/Region:
                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-61 <KAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        835 YVEED--YSE 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   786 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44 ARAQEDYNAPDCRFINVKKGQQIYYYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           leucine-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proline-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acidio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13.8%; Score 93.5; DB 1; Length 844; 32.9%; Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PID:g202344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                              in hema
                                                                                                                                                                                                                                13
```

```
F;126-170/Region: acidic
F;188-452/Domain: CDC24 homology <CD24>
F;188-452/Domain: CDC24 homology <KZ2>
F;509-557/Domain: protein kinase C zinc-binding repeat homology <KZ2>
F;522-542/Region: zinc finger CCCC motif
F;547-560/Region: zinc finger HCCH motif
F;547-560/Region: zinc finger HCCH motif
F;547-560/Region: SH3 homology <SH3A>
F;598-648/Domain: SH3 homology <SH3A>
F;664-756/Domain: SH3 homology <SH3B>
F;783-831/Domain: SH3 homology <SH3B>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Note: in the sequence from mouse the authors find three additional nucleotides that occurred in the published human sequences
C;Comment: In comparing these sequences with the mouse (see PIR:TVMSVV), there appear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: The hematopoietically expressed vav proto-oncogene shares homology with the di
A;Reference number: S23669; MUID:92228488; PMID:1565462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Map position: 19p13.3-19p13.3
C;Superfamily: vav transforming protein; CDC24 homology; protein kinase C zinc-binding C;Keywords: phosphoprotein; transforming protein; zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Adams, J.M.; Houston, H
Oncogene 7, 611-618, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: GDB: VAV1; VAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues: 62-839 < KAT2>
A; Cross-references: EMBL: X16316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;433/Binding site: phosphate (Ser) (covalent) (by protein kinase A) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Contents:
                                                                                                                                                                                                                                                       A;Map position: 9q34-9q34
C;Superfamily: vav transforming protein; CDC24 homology; protein kinase C zinc-binding C;Superfamily: vav transforming protein; CDC24 homology <CD24>F;198-462/Domain: CDC24 homology <CD24>F;524-572/Domain: protein kinase C zinc-binding repeat homology <K22>F;673-764/Domain: SH2 homology <SH2>F;823-872/Domain: SH3 homology <SH3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ann. Hum. Genet. 59, 25-37, 1995
A;Title: Identification of VAV2 on 9q34 and its exclusion as the tuberous sclerosis gen
A;Reference number: I51940; MUID:95283235; PMID:7762982
A;Accession: I51940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene VAV2 protein - human
C;Species: Homo sapiens (man)
C;Date: 01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change 16-Jul-1999
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Gene: GDB:VAV2
A;Cross-references: GDB:370880; OMIM:600428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-878 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Henske, E.P.; Short, M.P.; Jozwiak, S.; Bovey, C.M.; Ramlakhan, S.; Haines, J.L.; Kw.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:S76992; NID:g913345; PIDN:AAB34377.1; PID:g913346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y Match 13.5%; Score 91.5; DB 1; Length 839;
Local Similarity 32.9%; Pred. No. 0.27;
hes 23; Conservative 14; Mismatches 20; Indels 1
                                                                                                                                                               POCUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              830 YVEED--YSE 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR------VGWFPAN 829
812 VFTPRVIGTAVARYNFAARDMRELSLREGDVVRIYSRIGGDQG---WWKG-----ETN 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                      38 VYT---ISLARAQEDYNAPPCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEM 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           annotation
                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        I51940
                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GDB:127112; OMIM:164875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H.; Allen, J.; Lints, T.; Harvey, R.
                                                                                                                                                            12.5%; Score 84.5;
27.6%; Pred. No. 1.
                                                                                                                                20; Mismatches
                                                                                                                                                                                                 B
                                                                                                                                22;
                                                                                                                                                                                              Length 878;
                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13;
                                                                                                                                       13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                       Gaps
```

Ş

95 GIVGYFPSNLVREQRV 110

```
C;Date: 02-Sep-2000 #sequence_revision 02-Sep-2000 #text_change 30-Sep-2002
```

Acanthamoeba myosin-IA GPI

```
cell division control protein CDC25 - yeast (Saccharomyces cerevisiae)
N;Alternate names: protein L2142.6; protein YLR310c
C;Species: Saccharomyces cerevisiae
C;Date: 31-Mar-1988 #sequence revision 31-Mar-1993 #text_change 21-Jul-2000
C;Accession: A26596; SS1442; A23444; 843051; S47990
C;Bate: D; Toda, T.; Michaeli, T.; Levin, L.; Birchmeier, C.; Zoller, M.; Powers, Cell 48, 789-799, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: The S. cerevisiae CDC25 gene product regulates the RAS/adenylate cyclase pathwa A;Reference number: A26596; MUID:87131091; PMID:3545497 A;Accession: A26596 A;Molecule type: DNA A;Residues: 1-1589 <BRO>
A;Residues: 1-1589 <BRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Camonis, J.H.; Kalekine, M.; Gondre, B.; Garreau, H.; Boy-Marcotte, E.; Jacquet, M. EMBO J. 5, 375-380, 1986
A;Title: Characterization, cloning and sequence analysis of the CDC25 gene which control A;Reference number: A23444; MUID:86220116; PMID:3011405
A;Accession: A23444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Description: The sequence of S. cerevisiae cosmid L2142.
A; Reference number: S51437
A; Accession: S51442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:M15458; NID:g171184; PIDN:AAA34478.1; PID:g171185 R;Pauley, A. submitted to the EMBL Data Library, November 1994,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Description: positive control of level of cellular cAMP at the stage at which the cell (;Superfamily: budding yeast CDC25; CDC25-type guanine nucleotide exchange activator hor (;Keywords: cell cycle control; transmembrane protein F;65-123/Domain: SH3 homology <SH3> F;1301-1542/Domain: CDC25-type guanine nucleotide exchange activator homology <SOS>
          transposase homolog - Sulfolobus sp. plasmid pNOBB N;Alternate names: hypothetical protein 413 C;Species: Sulfolobus sp.
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: SGD: CDC25; CTN1; MIPS: YLR310c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: DNA
A;Residues: 877-1589 <DAN>
A;Cross-references: EMBL:X03579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Curr. Genet. 10, 879-885, 1986
A;Title: The CDC55 "Start" gene of Saccharomyces cerevisiae: sequencing of the active
A;Reference number: S43051; MUID:88194839; PMID:3329037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:X03579; NID:g3483; PIDN:CAA27259.1; PID:g3484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-496,'Y', 498-953,'LSVIMNLSR', 964-1589 <CAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Residues: 1-1589 <PAU>
A;Residues: 1-1589 <PAU>
A;Crons-references: EMBL:U17247; NID:g577216; PIDN:AAB67360.1; PID:g577222; GSPDB:GN0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Map position: 12R C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Cross-reterences:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: S43051
                                                                                                                                               RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                862 GRIGWÉPSTYVEEEGI 877
                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                            4.
U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                WWDGLVIDDSNGKVN-RGWFPQNFGRPLR 127
                                                                                                                                                                                                                                                                                                             FWAGSVYGDHQDEMGIVGYFPSNLVREQR 109
                                                                                                                                                                                                                                                                                                                                                                               LSSSPSTSELTSIRPIGIVVAAYDFNYPIKKDSSSQLLSVQQGETIYILNK----NSSG- 99
                                                                                                                                                                                                                                                                                                                                                                                                                                            LSSKKLCADEECVYTISLARAQEDYNAP----DCRFINVKKGQQIYVYSKLVTENGAGA 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGD:S0004301; MIPS:YLR310c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12.2%; Score 82.5; DB 1; Length 1589; 28.1%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                          R;Lee, W.L.; Ostap, E.M.; Zot, H.G.; Pollard, T.D. submitted to the EMBL Data Library, August 1998 A;Description: Hydrodynamic and ligand binding properties of
                          A; Reference number: Z21216
A; Accession: T32734
                                                                                                                                                                                                                         C; Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 08-Sep-2000
A;Status: preliminary; translated from GB/EMBL/DDBc
                                                                                                                                                                                       Accession: T32734
                                                                                                                                                                                                                                                       Species: Acanthamoeba castellanii
```

```
R;She, Q.; Phan, H.; Garrett, R.A.; Albers, S.V.; Stedman, K.M.; Zillig, W. Extremophiles 2, 417-425, 1998
A;Title: Genetic profile of pNOB8 from Sulfolobus: the first conjugative plasmid from A;Reference number: Z20959; MUID:99044580; PMID:9827331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein nrdE [imported] - Lactococcus lactis subsp. lactis (strain IL1403) C;Species: Lactococcus lactis subsp. lactis C;Date: 23-Mar-2001 #sequence_revision 23-Mar-2001 #text_change 03-Aug-2001 C;Accession: G86746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Genome: plasmid NOB8
C;Superfamily: Mycobacterium tuberculosis probable IS1081 transposase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: strain NOB8H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:AJ010405; NID:e1351926; PID:e1351973; PIDN:CAA09157.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Residues: 1-413 <SHE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: T31051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: The complete genome sequence of the lactic acid bacterium Lactococcus lactis A;Reference number: A86625; MUID:21235186; PMID:11337471 A;Accession: G86746
myosin-IA - Acanthamoeba castellanii
C;Species: Acanthamoeba castellanii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Gene: nrdE
C;Superfamily: Salmonella typhimurium ribonucleoside-diphosphate reductase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:AE005176; PID:g12723918; PIDN:AAK05073.1; GSPDB:GN00146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, Genome Res. 11, 731-753, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G86746
                                                                                                                                                                      밁
                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                       ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental source: strain IL1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Residues: 1-722 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plasmid NOB8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      350 LARFEEELG--GYFPS--LRSLEVY 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      296 KAISSLSQLVQPFSPARAKRILDAADKYCAFLNFPREVRHYLY----TNNTSESF--NST 349
                                                                                                                                                                                                                                                                                  249 GVVYLSLFHPDIMEFLSTKKENADEKIRVKTLSLG-----VTVPDKFYELVKKGETMYLF 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29 KKLCADEECVYTISLARAQEDYNAPD--CRFINVKKGQQIYVYSKLVTENGAGAFWAGSV 86
                                                                                                                                                                         304 EPYFVE------KYYGKPFAEVDITAEYDKMV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87 YGDHQDEMGIVGYFPSNLVREQRVY 111
                                                                                                                                                                                                                                                                                                                                          11 GLVALCAGHGMFMDKLSSKKLCADSEC-VYTISLARAQEDYNAPDCRFINVKKGQQIYVY 69
                                                                                                                                                                                                                              70 SKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDID 124
                                                                                                                                                                                                                                                                                                                                                                                                 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    11.4%; Score 77; DB 2; Length 722
28.7%; Pred. No. 7.3;
ative 14; Mismatches 44; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11.4%; Score 77; DB 2; Length 413; 31.8%; Pred. No. 3.9; tive 15; Mismatches 31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2; Length 722;
                                                                                                                                                                               -ANPEIRKTSIN 340
                                                                                                                                                                                                                                                                                                                                                                                                             24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ح</u>
                                                                                                                                                                                                                                                                                                                                                                                                                   Α.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J.; Ehr!
```

```
A;Introns: 1/3; 41/3; 72/2; 103/2; 162/3; 184/1; 217/1; 296/1; 340/3; 390/3; 447/3; 500. C;Superfamily: protozoan myosin heavy chain IB; myosin motor domain homology; SH3 homole; E_{1}^{2}14-674/Domain: myosin motor domain homology <MMO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: DNA
A;Residues: 1-1215 <LEE>
A;Cross-references: EMBL:AF085185; NID:g3599477; PID:g3599478; PIDN:AAC35357.1
A;Experimental source: strain Neff
protein-glutamine gamma-glutamyltransferase (EC 2.3.2.13) - red sea bream N;Alternate names: transglutaminase C:Species: Chrysophrys major (red sea bream) C;Date: 28-Oct.196 #sequence_revision 13-Mar-1997 #text_change 18-Jun-1993 C;Accession: $6662
C;Accession: $6662
C;Accession: $6662
C;Accession: $6662
C;Accession: $6662
C;Accession: $6662
C;Accession: $6662
A;Title: Tissue-type transglutaminase from red sea bream (Pagrus major). Sequence analys A;Reference number: $66662; MUID:98035874; PMID:7556189
A;Accession: $6662
A;Molecule type: mRNA
A;Residues: 1-695 <YAS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                            RESULT 10
S66662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Bevan, M.; Wedler, H.; Wedler, E.; Wambutt, R.; Bancroft, I.; Mewes, H.W.; Mayer, K.F submitted to the Protein_Sequence Database, March 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein T4F9.110 - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 30-Apr-1999 #sequence_revision 30-Apr-1999 #text_change 30-Apr-1999 C;Accession: T04200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         융
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Map position: 4
A;Introns: 57/3; 119/3; 137/3; 203/1; 266/3; 316/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Experimental source: cultivar Columbia; BAC clone T4F9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-332 <BEV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Note: T4F9.110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references: EMBL: AL049523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: T0420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Reference number: Z15260
                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1158 VPTVGRCRALYDYGAQEADELTLREGDVIDVIQK-----SGEWWEGTLNGK-----T 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1205 GVEPANYVED 1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125 QILFIISEGLVLQIGSHPNVYVLDTPGIFPPNLYDAEICAKLALTGLISTKHKQNDYIPV 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                             114 ATKEIPTTDI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38 VYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIV 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54 DCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 RILILLGGLVALCAGH------GMFMDKLSSKKLCADEECVYTISLARAQEDVNAP 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GYFPSNLVRE 107
                                                                                                                                                                                                                                                                                                                                                                                                                 WAKLCKSQDL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KVLF-----LYSHSRIAQR----AYWVGAIPDDIVGELKLARLF-LTILNSSHEYKK 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 75.5;
Pred. No. 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 75; D
Pred. No. 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches 59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 332;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Length 1215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22;
```

```
A;Cross-references: GB:879761; NID:g1176434; PIDN:AAB35370.1; PID:g1176435
C;Superfamily: protein-glutamine gamma-glutamyltransferase
C;Keywords: aminoacyltransferase
F;272/Active site: Cys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein F25H2.13 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 29-Oct-1999
C;Accession: T21356; T21540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: Z19411
A; Accession: T21356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Wilkinson,
                                                                                                                                                                                                                                                                                                                                                                                 A; Introns: 129/2; 177/1; 206/2; 349/3; 436/3; 506/2; 626/3; 689/3; 772/3; 845/3; 903/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: EMBL:Z83224; PIDN:CAB05720.1; GSPDB:GN00019; CESP:F25H2.13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: T21540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: EMBL:279754; PIDN:CAB02102.1; GSPDB:GN00019; CESP:F25H2.13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  submitted to the EMBL Data Library, September 1996
                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                             A; Map position
                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Gene: CESP: F25H2.13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Experimental source: clone F29C6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Residues: 1-994 <WI2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Reference number: Z19437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            submitted to the EMBL Data Library, December 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source: clone F25H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Residues: 1-994 <WIL>
                                             Ş
                                                                                             밁
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           393 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   448 KEREVYKKAGRRVTEPSNEI 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            106 REQRYYQEATKEI -- PTTDI 123
                                                                                          397 EEVALTEKGDGMEKVADFILSIYSTHAQDVAAAVGEETVKLVDRVDPKTVARNCKLYIQK 456
                                                                                                                                                                                          339 MDKLFGSSQLKSVPPLSGKASDGE-ILLETLAKAGFDANSVE-RLVDVLRDAISYLLSKN 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 105
                                             115 TKEIPTTDIDFFC 127
                                                                                                                                          72 ---LVTENGAG----AFWAGSVYGDH-QDEMGIVG-----YFPSNLVREQRVYQEA 114
                                                                                                                                                                                                                                            23 MDKL-SSKKL-----CADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21; Conservative
                                                                                                                                                                                                                                                                                       1 Similarity
37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10.9%;
Similarity 26.2%;
DKDNEKLTIKYFC 469
                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                             10.9%; Score 74; DB 2; Length 994; 27.8%; Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Mismatches
                                                                                                                                                                                                                                                                                            20; Mismatches 46; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 74; DB
Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

mixed-lineage protein kinase (EC 2.7.1.-) 3 - human N;Alternate names: protein kinase PTK1; protein kinase SPRK C;Species: Homo sapiens (man) C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999 C;Accession: A53896; 158395 C;Accession: A53800; 158395 R;Gallo, K.A.; Mark, M.R.; Scadden, D.T.; Wang, Z.; Gu, Q.; Godowski, P.J. J. Biol. Chem. 269, 15092-15100, 1994

RESULT 12

```
dihydrofolate reductase (EC 1.5.1.3) / thymidylate synthase (EC 2.1.1.45) - Leishmania m N,Contains: dihydrofolate reductase (EC 1.5.1.3); thymidylate synthase (EC 2.1.1.45) C;Species: Leishmania mexicana amazonemsis C,Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 11-Jun-1999 C;Accession: S15756; S08660 R;Nelson, K.; Alonso, G.; Langer, P.J.; Beverley, S.M. Nucleic Acids Res. 18, 2819, 1990 Nucleic Acids Res. 18, 2819, 1990 A;Title: Sequence of the dihydrofolate reductase-thymidylate synthase (DHFR-TS) gene of A;Title: Sequence of the dihydrofolate reductase-thymidylate synthase (DHFR-TS) gene of A;Title: Sequence of the dihydrofolate reductase-thymidylate synthase (DHFR-TS) gene of A;Title: Sequence of the dihydrofolate reductase-thymidylate synthase (DHFR-TS) gene of Section (Contains and Contains                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GDB:134755; OMIM:600050
A;Map position: 11q13.1-11q13.3
C;Superfamily: mixed-lineage protein kinase 3; protein kinase homology; SH3 homology
C;Keywords: ATP; leucine zipper; phosphotransferase; serine/threonine-specific protein
C;Keywords: ATP; leucine zipper; phosphotransferase; serine/threonine-specific protein
C;Keywords: ATP; leucine zipper; phosphotransferase; serine/threonine-specific protein
F;48-100/Domain: SH3 homology <SH32>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Ing, Y.L.; Leung, I.W.; Heng, H.H.; Tsui, L.C.; Lassam, N.J.
Oncogene 9, 1745-1750, 1994
A;Title: MIK-3: identification of a widely-expressed protein kinase bearing an SH3 domain A;Reference number: IS8395; MUID:94239754; PMID:8183572
A;Accession: IS8395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross references: EMBL:X51735; NID:g9470; PIDN:CAA36020.1; PID:g9471
C;Superfamily: bifunctional dihydrofolate reductase-thymidylate synthase; thymidylate sy C;Keywords: deoxyribonucleotide biosynthesis; methyltransferase; multifunctional enzyme; F;26-166/Domain: type I dihydrofolate reductase homology <DFR>
F;234-520/Domain: thymidylate synthase homology <TDS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Identification and characterization of SPRK, a novel src-homology 3 domain-cont
A;Reference number: A53800; MUID:94253068; PMID:8195146
A;Accession: A53800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;115-383/Domain: protein kinase homology <KIN>
F;123-131/Region: protein kinase ATP-binding motif
F;403-424/Region: leucine zipper motif
F;438-459/Region: leucine zipper motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:L32976; NID:g488295; PIDN:AAA59859.1; PID:g488296
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:U07747; NID:g464027; PIDN:AAA19647.1; PID:g464028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Status: preliminary A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Status: translation not shown A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-847 < RES >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Residues: 1-847 < GAL>
                                                                                      В
                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Residues: 1-520 < NEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: S15756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Reference number: S15756; MUID: 90251468; PMID: 2339068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;468-482/Region: basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: GDB:MLK3; PTK1; SPRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;400/Active site: Cys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocal Similarity
                                                                                           173 KLQEVYLTRIHTTAPACTRFFPFPPENAATAWDLASSQGRRKSAVDGLEFEICKYVPRN- 231
                                                                                                                                                                                                                                                                                              124 AQDIVVVNGGLAAA------VRLLARPPYCSSIETAYCVGGAQVYADAMLSPC----VE 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51 DYEPSGQDELALRKGDRVEVLSRDAAISGDEGWWAGQVGGO-----VGIFPSNYV 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLV 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
VREQRVYQEATKEIPTTDI 123
                                                                                                                                                                                                  KGQQIYV-----
                                                                                                                                                                                                                                                                                                                                                                                          ARILILLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVK 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.8%; Score 73; DB 24.5%; Pred. No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18; Mismatches
                                                                                                                                                                                                  --YSKLVTENGAGAFWAGSVYGDHQD----EMGIVGYFPSNL 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 73.5;
Pred. No. 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Length 847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
```

```
R;Bult, C.J.; White, O.; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Blake, Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, A. rson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Hurst, M.A. Science 273, 1058-1073, 1996

A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannaschi A;Reference number: A64300; MUID:96337999; PMID:86808087

A;Accession: C64427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  probable signal transduction protein - fission yeast (Schizosaccharomyces pombe) N;Alternate names: FCH domain and SH3 domain containing protein C;Species: Schizosaccharomyces pombe C;Date: 19-Jul-1996 #sequence_revision 13-Mar-1997 #text_change 21-Jul-2000 C;Accession: T39317; 867383 R;Wood, V.; Rajandream, M.A.; Barrell, B.G.; Beck, A.; Reinhardt, R. submitted to the EMBL Data Library, September 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Reference number: Z21844
A; Accession: T39317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein MJ1020 - Methanococcus jannaschii
C;Species: Methanococcus jannaschii
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Map position: 2
A;Introns: 23/3; 54/2; 612/1
A;Introns: 33/3; 54/2; 612/1
C;Superfamily: SH3 homology
F;614-665/Domain: SH3 homology <SH3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S6738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
   밁
                                                                                                                            밁
                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: SPBC11C11.02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Experimental source: strain 972h-; cosmid c11C11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:AL031528; PIDN:CAA20684.1; GSPDB:GN00067; SPDB:SPBC11C11.02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Residues: 1-670 < WOO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                    A; Map position: FOR950420-951199
                                                                                                                                                                                                                                                                                                                                                                                                                     C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:U67544; GB:L77117; NID:g1591671; PIDN:AAB99024.1; PID:g1591678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Accession: C64427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C64427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary; nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                  Match 10.7%; Score 72; DB 2; Length 259 Local Similarity 22.9%; Pred. No. 7.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      232 -HEERQYLELIDRIMKTGI 249
210 QIEVILSNEAGIFQIQEVLGEKIKWSGİKNYVSVYARVEKEKPVFEEIT 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       107 EQRV 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     617 DYDAAIPEEISFRKGDTIAVLK--LYEDG---WWEGFVVGEDDHNR-----GQFPSNFVR 666
                                                                                                                            162 GVIAVADGTDMTKGRSRIPICKKCYDIHSVSAASIER------VEIKEGDEKPI 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYG--DHQDEMGIVGYFPSNLVR 106
                                                          69 YSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFF--SNLVREQRVYQEAT 115
                                                                                                                                                                                       11 GLVALCAGHGMF--MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYV 68
                                                                                                                                                                                                                                                        25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1-259 <BUL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.8%; Score 73; DB 2; Length 670; 39.1%; Pred. No. 17;
                                                                                                                                                                                                                                                        21; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6; Mismatches
                                                                                                                                                                                                                                                        47; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21;
                                                                                                                                                                                                                                                        16;
                                                                                                                                                                                                                                                        Gaps
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD010805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
             S
                                         밁
                                                                 Ś
                                                                                            US-10-019-455A-47 (1-128) x BD010805 (1-384)
                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Snoo
                                                                                                                        Query Match:
DB:
                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                          Fred.
                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                          ŏ
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                            A61P19/08,
PC C07K14//
G01N33/53//
PC C12P21//
PC C12P21//
CC C12P21//
FH Key
FT source
FT /organi/
                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel polypeptide and DNA thereof.
                                        PR OG SO SO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel polypeptide and DNA thereof patent: JP 2001069994-A 6 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JP 2001069994-A/6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD010805.1 GI:18639178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD010805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD010805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rrcrosscreschererraresreaccaccassareasaressarricreserrarric 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ĊĊĊŔĠĊŔŔĊŦŦĠĠŦŦŔĠŔĠŔĠĊŖŔĊĠŔĠŦĠŦŔĊĊŔĠĠŔĠĠĊĊŔĊĊŔŔĠĠŔĠŔŦŤĊĊŔŔĊĊ 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 384
MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                          C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                     C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus sp. (mouse)
JP 2001069994-A/6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                 86
                                                                                                                                                                                                                                                                                                            source 1. .384
/organism='Mus sp. (mous Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                   C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                    YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-MAR-2001
                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                              /mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 1
                                                                                                                                                                                                                                                                                       /organism="Mus sp."
                                                                                                                        1.8e-69
655.00
98.44%
96.09%
96.89%
6
                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                               (mouse)'.
                                                                                                                                                   Matches:
Conservative:
Mismatches:
                                                                                                                                          Indels:
                                                                                                                                                                                                                                                    107 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                      40
                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
```

```
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD093106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                          FEATURES
                                                  Query Match:
                                                                     Best Local Similarity:
                                                                                                                            Pred. No.:
                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                  BASE COUNT
US-10-019-455A-47 (1-128) x BD093106 (1-384)
                                                                                      Percent Similarity:
                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel polypeptide and its DNA.
BD093106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel polypeptide and its DNA
PATENT: WO 0102564-A 6 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ito,Y., Nishi,K., Ogi,K., Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO 0102564-A/6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD093106.1 GI:22638694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD093106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProSerAsmLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ThraspileaspphePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGGATCCCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                    A61K38/17,
                                                                                                                                                                                                                                                                                                                                                                               MOGI, VOSUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                   98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                 02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus sp. (mouse WO 0102564-A/6
                                                                                                                                                                                                                                                                                                                                                                A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                  a
                                                                                                                                                                                                           /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
                                                                                                                                                                                                                                                                                   Location/Qualifiers Location/Qualifiers
                                                98.44%
96.09%
96.89%
                                                                                                         1.8e-69
655.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (mouse)
                                                                                                                                                                                                   68
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ogi, K., Okubo, S., Mogi, S., Noguchi, Y.,
                                                                                                                                                                                                   111 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       384 bp
                                                                                                         Length:
Matches:
                                   Gaps:
                                                        Mismatches:
Indels:
                                                                                          Conservative:
                                                                                                                                                                                                     107
                                                                                                                                                                                                     rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                     0023118
234
486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 27-AUG-2002
```

```
Ś
                                           멼
                                                                       Ş
                                                                                                           В
                                                                                                                                         S
                                                                                                                                                                             8
                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-47 (1-128) x BD010835 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                           181
                                                                                                                                                                    121 ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC 180
                                                                                                                         61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                           41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                     61 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                           21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y. Yoshimura,K. and Tanaka,H. Nereof polypeptide and DNA thereof Patent: JP 2001069994-A 36 21-MAR-2001; TAKEDA CHEMICAL KUDUSTRIES LTD OS Rattus Sp. (rat) PN JP 2001069994-A/36 PD 21-MAR-2001 JP 2000195911 PF 29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A61P19/08,
PC C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC G01N33/53//
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus sp. Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD010835.1 GI:18639208 JP 2001069994-A/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PI YASUAKI I
SHINICHI MOGI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD010835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD010835
     ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                         PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                          ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                            MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyH:sGly
                                    TTCTGGGCTGGCAGTGTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTC
                                                                                                      AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polypeptide and DNA thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g 10
                                                                                                                                                                                                                                                                                                                                                                                                                        5.45e-72
676.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109 g
                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 105 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                        60
Ś
                                밁
                                                                Ş
                                                                                                  밁
                                                                                                                              Ś
                                                                                                                                                                   밁
                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD093136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                      98
```

```
US-10-019-455A-47 (1-128) x BD093136 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                             21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                            1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel polypeptide and its DNA
Patent: WO 0102564-A 36 11-JAN-2001;
PATENTA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
CGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
HIDEYUKI TANAKA
OS RATTUB SD. (Yat)
PN WO 0102564-A/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel polypeptide and its DNA.
BD093136
BD093136.1 GI:22638724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO 0102564-A/36.
                                                                                IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                 ATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC 120
                                                                                                                                                                                                                                                ATGGCAAGAATATTGATTCTTTTGCTTGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A61K38/17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                 5.45e-72
676.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 27-AUG-2002
                                                                                                                                                                                                                                                60
```

```
Command line parameters:

-MODEL-frame+ p2n.model -DEV=xlh
-Q=/Ggn2 1/USPTO_Spool/US10019455/runat_29122003_160347_240/app_query.fasta_1.1770
-Q=/Ggn2 1/USPTO_Spool/US10019455/runat_29122003_160347_240/app_query.fasta_1.1770
-DB=GenEmb1 -QFMT=fastap -SUFFIX=rge -MINMANTCH=0.1 -LCOPCL=0 -LIGT=45
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCGALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFWT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXIEN=200000000
-USER=US10019455_@CGN 1 1 6034 @runat 2912203 160347 240 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBIJCK=100 -LONGLOG
-DSV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-PGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELCP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                  GenEmbl:*

1: gb_ba:*
2: gb_htg:*
3: gb_on:*
5: gb_ov:*
5: gb_ov:*
9b_pat:*
9b_pt:*
9b_pt:*
9b_pt:*
9b_pt:*
9b_pt:*
9b_pt:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December 29, 2003, 16:11:59; Search time 2106.98 Seconds (without alignments) 2485.278 Million cell updates/sec
                                                                                                                                                                                      BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2888711 seqs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILILLIGGLVALCAGHG.....RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
em_mu:
em_or:
em_or:
em_opat:
em_ph:
em_ph:
em_rol:
em_rol:
em_rol:
em_un:
em_un:
em_un:
                                                                                                                                                                                                     gb_sy:*
gb_un:*
gb_vi:*
em_ba:*
em_fun:*
em_fun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.00.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5777422
```

```
29: em_vi:*
30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htg_other:*
34: em_htg_pln:*
36: em_htg_pln:*
36: em_htg_pln:*
36: em_htg_vrt:*
37: em_htg_vrt:*
38: em_sy:*
40: em_htgo_hum:*
40: em_htgo_other:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	0.0	α			전
4 4 4 4 4 4 7 4 4 4 7		; ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	10000000000000000000000000000000000000	1 1 2 3 3 3 4 4 4 4 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1	Result
275.5 275.5 273.5 270		00.04 400.04 400.05 500.04 404 500.04	591 574 541		Score .
40.8 40.8 9.9	0000000	3997.8877.0 3288877.0	9977440	100.0 100.0 96.9 96.9 96.9 96.9 96.9 96.9 96.9	Query
518 518 548	121151 396 396 459 459 459	307 307 307 484 261 261 245 215 261 1447 85	1422 330 330 330	384 384 384 384 384 384 384 1054 384 384 384 384 384 384 384 384 384 38	Length
Q Q 70 4	99999	ννυσουσοσ	, თ თ თ თ თ დ ი	******	BB
HCMGRPMA HC05910 AX253435 BTU51437	05D1 0704 0077 942 942 1678 5250 8720	BD09311/ BD093131 BD093131 BF233518 BD010829 BD093130 BF233519 AF233519 AC106161	20000000	BD010835 BD093136 BD010805 BD010805 BD010821 BD093122 MYU243333 BD010802 AF233333 BD010802 BD093123 AX358818 AX358818 AX358818 AX362311 AX454774 AX4491252 AF233261 BD010802 BD010802 BD010802 BD010802 BD010802	ID
X75450 H.sapiens m BC005910 Homo sapi AX253435 Sequence US1437 Bos taurus	4428 7044 07775 42 Se 6785 7209	BD010830 Novel pol BD010830 Novel pol BD093131 Novel pol AF233518 Gallus ga BD010829 Novel pol BD093130 Novel pol AF233519 Rana cate AC106161 Rattus no	2552 Homo (0836 Novel 3137 Novel 3137 Novel 3118 Novel 3118 Novel 0816 Novel	D010835 D010805 D010805 D010805 D010805 D010821 D010821 D091192 D09110802 D09110802 D09110802 D09110802 D09110802	Description

ALIGNMENTS

```
RESULT 13
US-08-491-861A-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-466-793-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: IMI-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 89:
SEQUENCE CHARACTERISTICS:
LENGTH: 182 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 593928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 89, Application US/08491861A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                               TELEFAX: (617) 742-42
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: peptide FRAGMENT TYPE: internal
                                                                                                                NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IMI-026CP(IPC-048CP)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII-text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Morgenstern, Jay P.
APPLICANT: Kanieczny, Andrzey
APPLICANT: Bizindaukas, Christine B.
APPLICANT: Bizindaukas, Christine B.
APPLICANT: Brauer, Andrew W.
TITLE OF INVENTION: Allergenic Proteins and Peptides from Dog
                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/999,712
FILING DATE: 31-Dec-92
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/491,861A
FILING DATE: 27-OCT-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
POPOLOGY:
                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116 DYERYVMFHLVNVNNGEAFQLMELYGRTKD 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63 GQQIYVYSKLVTENGAGAFWAGSVYGDHQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 FMQHIDVLENSLGFKLCIKÉNGÉCRKLYSVÁ-----YKTPKIGEYFLEYDGGNTFTILKT 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30 ------RFINVKK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MKLILLLCLGLILVCZGHAEEANSERGNLDVDKLNGDWFSIVVASNKREKIEENGSMRV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MARILILLGGLVALCAGH-------GMFMDKL-----SSK------ 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Æ
                                      182 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                 (617) 742-4214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LAHIVE & COCKFIELD, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.9%; Score 73.5; DB 2; Length 182; 24.7%; Pred. No. 0.29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104
                                                                               89:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMI-026CP(IPC-048CP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39; Indels 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
; SEQUENCE DESCRIPTION: SEQ ID NO: 89: US-09-374-671A-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-374-671A-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-491-861A-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 89, Application Patent No. 6489118
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 10.9%; Score 73.5; DB Best Local Similarity 24.7%; Pred. No. 0.29; Matches 37; Conservative 11; Mismatches
                                               Query Match
                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 89: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: FRAGMENT TYPE:
                      Local
                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: peptide FRAGMENT TYPE; internal
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 08/156,549
FILING DATE: 1993-NOV-22
APPLICATION NUMBER: US 07/999,712
FILING DATE: 1992-DEC-31
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/09/374,671A FILING DATE: 16-Aug-1999 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Amy E. Mandragouras
STREET: 28 State Street
                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: IMI-026C2CNCPA TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Allergenic Protein and Peptides from Dog Dander and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Morgenstern, Jay P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         116 DYERYVMFHLVNVNNGEAFQLMELYGRTKD 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30 -----REINVKK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63 GQQIYVYSKLVTENGAGAFWAGSVYGDHQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 FMQHIDVLENSLGFKLCIKENGECRKLYSVA----YKTPKIGEYFLEYDGGNTFTILKT 115
th 10.9%; Score 73.5; DB Similarity 24.7%; Pred. No. 0.29; 37; Conservative 11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MARILILLIGGLVALCAGH------GMFMDKL-----SSK------ 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MKLILLLCLGLILVCZGHAEEANSERGNLDVDKLNGDWFSIVVASNKREKIEENGSMRV 60
                                                                                                                                                                                                                                                                                                                                                                           NAME: DiGiorgio, Jeanne M. REGISTRATION NUMBER: 41,710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: MA
                                                                                                                                                                                                 LENGTH: 182 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                       TELEPHONE: (617) 227-7400
TELEFAX: (617) 742-4214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: ASCII Text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09374671A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide
internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bizindaukas, Christine B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brauer, Andrew W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Konieczny, Andrzej
                                                                                                                                      internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                        DB 4; Length 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2; Length 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39; Indels 63;
    Indels
  63;
  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6;
```

7 51	92 VQ
11 GLVALCAGHGMFMDXLSSKKLCADEECVYTISLARAQEDY	B 8
Query Match 10.5%; Score 71; DB 4; Length 509; Best Local Similarity 21.2%; Pred. No. 2.7; Matches 36; Conservative 24; Mismatches 38; Indels 72; Gaps 10;	7 m C
SOULT 15 -08-610-194, Application US/08630915A Sequence 194, Application US/08630915A Sequence 194, Application US/08630915A Sequence 106, Application US/08630915A PREENT INCOMMATION: APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: HOSPMAN, NO. 64309820h APPLICANT: USA USING SAME NUMBER OF SEQUENCES. 227 CORRESPONDENCE ADDRESS: ADDRESSE: Pennie & Edmonds LLP STREET: 1155 Avenue of the Americas STREET: 1155 Avenue of the Americas CONFORTY: New York STATE: New York STATE: New York CONFORTS: New Tork STATE: New York CONFORTS: New York STATE: New York STATE: New York CONFORTS: New York STATE: New York CONFORTS: New York STATE: New York STATE: New York STATE: New York CONFORTS: New York STATE: New York STATE: New York STANDEDRESSE: LEATH: S09 anino acids STANDEDRESSE: TOPOLOGY: unknown MOLECULE TYPE: peptide 5-08-6130-915A-194	US REC
7 63 GQQIYVYSKLVTENGAGAFWAGSVYGDHQD 92 	B &
30 61 FMQH	유 성
1 MARILILLIGGLVALCAGH	D 62

Search completed: December 29, 2003, 16:10:41 Job time : 14.2661 secs

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
      33228878331132288783322887887878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                Score
    70.5
70
70
69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127863 segs, 47026705 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               December 29, 2003, 16:03:18; Search time 5.01961 Seconds (without alignments) 1199.181 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MARILILLIGGLVALCAGHG......RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
    100.7
                                                                                                                                                                                                    10.9
                                                                                                                                                                                                                                    SwissProt_41:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                               OTOR RANCA
MIA HOWAN
MIA BOVIN
MIA BOVIN
MIA RAT
VAV RAT
VAV VOUSE
VAV HUMAN
VAV2 HUMAN
VAV2 HUMAN
VAV2 HUMAN
VAV2 HUMAN
CC25 YEAST
SHK1 HUMAN
CC25 YEAST
SHK1 HUMAN
CC25 YEAST
SHK1 HUMAN
CC35 YEAST
SHK1 HUMAN
CC35 YEAST
SHK1 HUMAN
CC35 YEAST
SHK1 HUMAN
CC37 PAGMA
CC37 PAGMA
CXA7 MOUSE
EFGM DROME
ARHG HUMAN
CXA7 MOUSE
EFGM DROME
ARHG HUMAN
CXA7 MOUSE
EFGM DROME
ARHG HUMAN
CXA7 MOUSE
EFGM DROME
ARHG HUMAN
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM DROME
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE
EFGM TOMAN
CXA7 MOUSE

                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTOR_MOUSE
OTOR_HUMAN
OTOR_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127863
                                               Q9nzm3
P51544
                                                                          Q9vm33
Q15052
Q95049
Q02779
                                                                                                                                                                                                                                  P04821
Q9y566
Q9wv48
                                                                                                                                                                                    P16126
Q10199
                                                                                                                                                                                                                                                                                               P15498
Q9ukw4
Q60992
                                                                                                                                                                                                                                                                                                                                                                                      Q9jie3
Q9nrc9
Q9i8p6
Q9i8p5
Q16674
Q28038
Q628038
                                                                                                                                                                                                                  P52181
                                                                                                                                                                                                                                                                                                                                           P27870
Q9r0c8
                                  P05729
                                                                                                                                           P28229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                            2 homo sapien
9 homo sapien
9 homo sapien
3 homo sapien
4 nordotis ma
                                                                                                                      mus musculu
drosophila
                                                                                                                                                                   methanococc
                                                                                                                                                                                                                                                                               homo sapien
homo sapien
mus musculu
homo sapien
                                                                                                                                                                                                                                                                                                                                         ) rattus norv
) mus musculu
8 mus musculu
                                                                                                                                                                                                                                 homo sapien
                 euglena gra
rattus norv
                                                                                                                                                                                                   pagrus majo
leishmania
                                                                                                                                                                                                                                                               saccharomyc
                                                                                                                                                                                                                                                                                                                                                                                       mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                    homo sapien
bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                       rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                    rana catesb
 sapien
```

PT KW DR DR DR

CHAIN DOMAIN

18 128 110

POTENTIAL. OTORAPLIN. SH3.

			នននន	នននន	88888	ខ្មុខខ្	R R R R R	R R R R R R R R R R R R R R R R R R R	2	88888		RES					
PROS Sign	GO; (EMBL EMBL HSSP	enti	This betw the 1		mela poly Geno	SEQU TISS MEDL Rend "Ide	Deni "A n anal Geno	SEQU (1)	Mus Euka Mamm	16-0 28-0 76-0	ULT 1 R_MOUS OTOR		2444 2040 2040	40 41	36 38	ω ω 4 τυ
TE; PS5	0:00015 CPro; IF	AF2333 AJ2439 Q16674	fied and ties requend an e	SWISS-E een the Europear	TISSUE S SIMILARI SIMILARI	noma inh norphism nics 71:	ENCE FROUE=Fetal INE=2110 Lorff N.	s C.S., s C.S., ovel cor ysis, ar mics 66:	ENCE FRO	OR MIAI musculus ryota; N alia; Eu TaxID=1	CT-2001 CT-2001 EB-2003 EB-2003	EMOUSE		77.		68 68 68 5	6 6 9 9
domain.	R001452	33; AAF 39; CAC 1; 111J.	this s mail to	PROT ent Swiss Bioinf -profit	SPECIFIC (TY: BEI	nibitory n that a :40-52(2	DM N.A. L; D0875; F D0, Frc	Bell A. served chron chron 242-248	OM N.A.	<pre>Mouse Metazoa; Itheria; 10090;</pre>	(Rel. 4 (Rel. 4 (Rel. 4	STAN		0000	000	000	00
H3; 1.	11 ag 13 .	79	licens licens	ry is c Institu ormatic insti	CONGS TO	ractivi bolishe	wbMed=1 din M.,	M., Hud cochleanosomal (2000).	ubMed=1	nt da	a st st ea	dard;					
	condens		t is not 1 e agreemen e@isb-sib	opyright. te of Bio: s Institut tutions as	GHLY EXPRI THE MIA SH3 doma	ty (MIA) -: s transla	CT I CO	დ - ⊅••	0873378;	ta; Crani ia; Sciur	sequence annotati	PRT;	ALIG	SRK1_SP SRK4_SP RIR3_EC EFG1_HU	VINE_MO	AROA_ST	TBG_ENT
	ation; IMP.		ved. Usage by See http://www	is produced rmatics an There are ng as its	D IN COCHLE	<pre>ce gene (MIAL) wi on.";</pre>	ch T., Vekemans M	isendes B.L., We forton C.C.; identification		rtebrata; ; Muridae;) te) ctivity-	128 AA.	NMENTS				
			and f	무용한		ر ر	pre	expre)	10 UI	prote			696 690 452 199	155 128 cn2	199 0h1 283	40
				1.000		equent	erup N	8 8	ì	omi; Mus.	n).			spongilla l spongilla l escherichia homo sapien	mus musculu mycobacteri	22 25	entamoeba h homo sapien
1	ROSITE; PS50002; SH3; 1.	O; CO:001502; P: CCCI. O; CO:001502; P: Cartilage condensation; nterPro; IPR001452; SH3. ffam; PF00018; SH3; 1. MART; SM00326; SH3; 1. ROSITE; PS50002; SH3; 1. ignal; SH3 domain.	MBL; AF233333; AAF82079.1; MBL; AJ243939; CAC27444.1; ISSP; Q16674; 111.0 (CD; MGI:1888678; Otor. (CD; MGI:1888678; Otor. (CD; PR001452; Proartilage condensation; Interpro; IPR001452; SH3. fam; PF00018; SH3; 1. MART; SM00326; SH3; 1. ROSITE; PS50002; SH3; 1. ignal; SH3 domain.	ndified and this statement is not removed. Usage by and for ntities requires a license agreement (See http://www.isb-sib.ch). r send an email to license@isb-sib.ch). MBL; AF23333; AAF82079.1; MBL; AJ243939; CAC27444.1; ISSP; Q16674; IIIJ. ISSP; Q16674; PIIIJ. O; G0:0001502; P:cartilage condensation; IMP. nterpro; IPR001452; SH3. fam; PF00018; SH3; 1. MART; SM0326; SH3; 1. FSST002; SH3; 1. Ignal; SH3 domain.	This SWISS-PROT entry is copyright. It is produced through a collaborate wetween the Swiss Institute of Bioinformatics and the EMBL outstation he European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no indiffied and this statement is not removed. Usage by and for commerce ntities requires a license agreement (See http://www.isb-sib.ch/announ send an email to license@ib-sib.ch). MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; SSP; Q16674; IIIJ. MBL; AF23333; PCC27444.1; ISSP; Q16674; IIIJ. MBL; AF23333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF23333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1; MBL; AF233333; AAF82079.1;	I- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN COCHLEA. I- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY. I- SIMILARITY: Contains 1 SH3 domain. This SWISS-PROT entry is copyright. It is produced through a collection of the Swiss Institute of Bioinformatics and the EMBL outher burdens Bioinformatics Institute. There are no restriction he European Bioinformatics Institute of Bioinformatics and the EMBL outher statement is not removed. Usage by and for intities requires a license agreement (See http://www.isb-sib.ch). MBL; APZ33333; AAF82079.1; MBL; APZ33333; AAF82079.1; MBL; APZ33333; AAF82079.1; MBL; APZ33333; AAF82079.1; MBL; APZ33333; AAF82079.1; MBL; APZ33333; AAF82079.1; MBL; SPS Q16674; IIIJ. O; G0:0001502; P:cartilage condensation; IMP. nterpro; IPR001452; SH3; 1. fam; PF00018; SH3; 1. fam; PF00018; SH3; 1. fam; SH3 domain.	relanoma inhibitory activity (MIA)-like gene (MIAL) with a frequency olymorphism that abolishes translation."; lenomics 71:40-52(2001). '- SUBCELLULAR LOCATION: Secreted (Potential). '- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY. '- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY. '- SIMILARITY: Contains 1 SH3 domain. 'his SWISS-PROT entry is copyright. It is produced through a collective of Bioinformatics and the EMBL outlies and the Swiss Institute of Bioinformatics and the EMBL outlies the European Bioinformatics Institute. There are no restriction is by non-profit institutions as long as its content is condified and this statement is not removed. Usage by and for intities requires a license agreement (See http://www.isb-sib.ch. wrsend an email to license@isb-sib.ch). MBL; AJ243933; AAF82079.1; MSL; AJ24393; P:Cactilage condensation; IMP. Octor: GCD, MGI:188678; Otor: GCD, GCD:0001502; B:Catrilage condensation; IMP. TREPPO: IPR001452; SH3; 1. ROSITE; PS50002; SH3; 1. Egnal; SH3 domain.	INSUE-Fetal; INSUE-Fetal; PubMed=11161796; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommeru; lendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T., Vekemans M., Attie-Bitach T	benis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; A novel conserved cochlear gene, OTOR: identification, expressional malysis, and chromosomal mapping."; benomics 66:242-248(2000). BEQUENCE FROM N.A. ISSUE=Fetal; EDLINE=21100875; PubMed=11161796; EDLINE=21	EDQUENCE FROM N.A. INDITING=20334619; PubMed=10873378; ROBLING=20334619; PubMed=10873378; Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S Penis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; Na novel conserved cockhlear gene, OTOR: identification, expressionallysis, and chromosomal mapping."; Penomics 66:242-248(2000). PEQUENCE FROM N.A. PESQUENCE FROM N.A. PESQUENCE FROM N.A. PESQUENCE FROM N.A. PESQUENCE FROM N.A. PEOLINE=21100875; PubMed=11161796; PEDLINE=21100875; PEDLINE=21106796; PEDLINE=21161796; PEDLINE=21161796; PEDLINE=21	Nus musculus (Mouse). Nus musculus (Mus Musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus mus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus musculus (Mouse). Nus mus mus mus mus mus mus mus mus mus m	6-OCT-2001 (Rel. 40, Created) 6-OCT-2001 (Rel. 40, Last sequence update) 8-FEB-2003 (Rel. 41, Last sequence update) Proraplin precursor (Melanoma inhibitory activity-like protein). Type or MIAL. Mus musculus (Mouse) Mus musides B.L., Weremowicz (Mus Murinae; Musculus (Musculus Musides; Musculus (Musculus Musides; Musculus Musides; Musculus (Musculus Musides; Musculus Musides; Musculus (Musculus Musides; Musculus (Musculus Musides; Musculus Musculus (Musculus Musides; Musculus (Musculus Musculus Musculus Musculus (Musculus Musculus Musculus Musculus Musculus (Musculus Musculus Musculus Musculus Musculus Musculus (Musculus Musculus e update) ation update) hibitory activity-like protein). aniata; Vertebrata; Euteleostomi iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iurognathi; Muridae; Murinae; Mu iorognathi; Muridae; Muri	VILE OUTSID	67.5 10.0 505 1 SRRI SPOLA P42696 spo 67.5 10.0 713 1 RTR3 ECCLI P42690 spo 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 939452 esc 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 939452 esc 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 939452 esc 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 939452 esc 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 939452 esc 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 939452 esc 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 939452 esc 67.5 10.0 751 1 RTR3 ECCLI P42690 spo 94.5 10.0 94.5 10	68 10.1 646 1 PIXE HUWAN Q014155 hom 67.5 10.0 343 1 LYRE_MOUSE Q97128 must 67.5 10.0 506 1 SRK1_SPOLA P4268 g90 67.5 10.0 506 1 SRK1_SPOLA P4268 g90 67.5 10.0 710 1 RRF3_EOCIA P4268 g90 67.5 10.0 713 1 RRF3_EOCIA P4269 g90 67.5 10.0 713 1 RRF3_EOCIA P4269 g90 67.5 10.0 713 1 RRF3_EOCIA P4269 g90 67.5 10.0 713 1 RRF3_EOCIA P4269 g90 67.5 10.0 713 1 RRF3_EOCIA P4269 g90 67.5 10.0 751 1 EFGI_HUWAN P42690 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 67.5 10.0 751 1 EFGI_HUWAN PA269 g90 g90 g90 g90 g90 g90 g90 g90 g90 g9	68 10.1 427 1 AROA STRPRY 68 10.1 430 1 AROA STRPRY 68 10.1 430 1 AROA STRPRY 68 10.1 430 1 AROA STRPRY 68 10.1 430 1 AROA STRPRY 68 10.1 1733 1 VINE MOUSE 67.5 10.0 50.5 1 SRRI_SPOLA 67.5 10.0 50.5 1 SRRI_SPOLA 67.5 10.0 50.5 1 SRRI_SPOLA 67.5 10.0 50.5 1 SRRI_SPOLA 67.5 10.0 50.5 1 SRRI_SPOLA 67.5 10.0 7.1 1 RTRR_SPOLA 67.5 10.0 7 1 RTRR_SPOLA 67.5 1 RTRR_SPOLA 67.5 1	

```
RESULT
OTOR_H
     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTOR HUMAN
Q9NRC9;
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
DISULFID
SEQUENCE
Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., Jones M., Stavrides G., Almedda J.P., Babbage A.K., Bagguley C.L., Bailey J., Bartow K.F., Bates K.N., Beard L.M., Beare D.M., Beare D.M., Beare D.M., Beare D.M., Butter B.P., Bridgeman A.M., Brown A.J., Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P., Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M., Clarge S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M., Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HUMAN
                                                                                                                                                                                                                  MEDLINE=21100875; PubMed=11161796; Rendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommerup N., "Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent polymorphism that abolishes translation.";
                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE=21638749; PubMed=11780052;
                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20568254; PubMed=10998416; Cohen-Salmon M., Frenz D., Liu W., Verpy E., Voegeling S., Petit C.; "Fdp, a new fibrocyte-derived protein related to MIA/CD-RAP, has an in vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; "A novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity like protein).
OTOR OR FDP OR MIAL.
                                                                                                                                                                                                                                                                                                    TISSUE=Brain, and Cochlea;
                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                     mesenchyme."
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genomics 66:242-248(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Otoraplin precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20334619; PubMed=10873378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                      71:40-52(2001)
                                                                                                                                                                                                                                                                                                                                                    Chem. 275:40036-40041(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MARILILLIGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 40, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37
127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14328 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Fibrocyte-derived protein) (Melanoma inhibitory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96.9%;
96.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 655;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3DD47D4C77C4A7FD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .4e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
Ś
                                                                      밁
                                                                                                    Ş
                                                                                                                                            맑
                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                              RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E., RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J., RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D., RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S., RA Lehvaeslaiho M.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D., RA Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A., RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsy H., RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsy H., RA Skuce C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S., RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E., RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A., RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A., RA Whitehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A., RA Milming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S., RA ROGERS T.
                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF233261; AAF82078.1; -.
EMBL; AF243505, AAG42356.1; -.
EMBL; AJ242552; CAC27443.1; -.
EMBL; AJ252324; CAC28085.1; -.
EMBL; AJ252325; CAC28085.1; JOINED.
EMBL; AJ252326; CAC28085.1; JOINED.
EMBL; AJ252327; CAC28085.1; JOINED.
EMBL; AJ252327; CAC28085.1; JOINED.
EMBL; AJ252327; CAC28085.1; JOINED.
                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "The DNA sequence and comparative analysis of human Nature 414:865-871\,(2001).
                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001452; S
Pfam; PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30; GO:0007605; P:hearing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted (Potential).
TISSUB SPECIFICITY: HIGHLY EXPRESSED IN COCHLEA.
SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Contains 1 SH3 domain.
121
                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  606067;
                                                                      61
                                                                                         61 KKGQQIYYYSKLYTENGAGAFWAGSYYGDHQDEMGIVGYFFSNLYREQRVYQEATKEIFT
                                                                                                                                                                                  _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HGNC:8517;
                                                                                                                                                                                                                                       Similarity
TDIDFFCE 128
                                  TDIDFFCE 128
                                                                      KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT
                                                                                                                                                                                MARILILLLGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                     PS50002; SH3; FALSE_NEG
                                                                                                                                                                                                                                                                                            128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                      domain.
                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                             19
32
55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTOR.
                                                                                                                                                                                                                                                                                                               18
128
110
37
127
                                                                                                                                                                                                                                                                                          14332 MW;
                                                                                                                                                                                                                                   88.8%;
                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                           OTORAPLIN.
SH3.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                   Score 600; DB 1;
Pred. No. 5.3e-54;
                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                            9BB52C7F5D4FB700 CRC64;
                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                    Length 128;
                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chromosome 20.";
                                                                                                                                                                                                                    0
                                                                                                                                                                                                                Gaps
                                                                                                      120
                                                                                                                                            60
                                                                                                                                                                                                                    0
```

```
OTOR
ID AC
DT
DT
DT
DT
DT
                                                                                                                                                                                  δ
                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                           Ś
                                                                                                                 RESULT 4
                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local .
                                                                                                                                                                                                                                                                                                                                      Matches
                   Q918P5;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTOR CHICK STANDARD; PKT; 152 AA

0918P6;

16-OCT-2001 (Rel. 40, Created)

16-OCT-2001 (Rel. 40, Last sequence update)

28-FEB-2003 (Rel. 41, Last annotation update)
 Otoraplin precursor. OTOR.
                                                                                                RANCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               analysis, and chromosomal mapping.";
Genomics 66:242-248(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=20334619; PubMed=10873378;
Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S.,
Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.;
"A novel conserved cochlear gene, OTOR: identification, expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SUBCELLULAR LOCATION: Secreted (Potential).
-!- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN COCHLEA.
-!- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
-!- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Otoraplin precursor.
                                                                                    OTOR RANCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF233518; AAF82727.1; -.
HSSP; Q16674; IIIJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nterPro; IPR001452; SH3.
                                                                                                                                                                                       123 IDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; SH3
                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                64
                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                             œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SM00326; SH3;
                                                                                                                                                                                                                                                                                                                                                  n 68.6%;
Similarity 71.4%;
                                                                                                                                                                                                                                                                                                     ILILLLGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKG
                                                                                                                                                           IDFFCE 132
                                                                                                                                                                                                                   QLIYVYSKLVKEKESGEFWAGSVYGEEYEDHMGTVGYFPRSLVSEQHVYQEANKTIPTTD
                                                                                                                                                                                                                                             QQIYVYSKLVTENGAGAFWAGSVYG-DHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTD 122
                                                                                                                                                                                                                                                                           IVLFLCFGLMNPFA-TGIFMDKLASKKLCADDDCVYTISLVRAEEDYNAPDCRFINIKKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS50002; SH3; 1
                                                                                                                                                                                                                                                                                                                                                                                           1
24
42
35
38
58
132 AA;
                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   domain.
                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                         23
132
114
40
                                                                                                                                                                                                                                                                                                                                                                                              15177 MW;
                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                          SH3.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                  Score 464; DB 1;
Pred. No. 3.5e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
OTORAPLIN.
                                                                                                                                                                                                                                                                                                                                                                                              9D1CB07FD353CE1C CRC64;
                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                    133
                                                                                                                                                                                                                                                                                                                                     20;
                                                                                                                                                                                                                                                                                                                                                              Length 132;
                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                           66
                                                                                                                                                                                                                                                                                                        63
```

```
밁
                                                                                                                                                                                                                                                                                                                                                  닭
                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                           RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIA_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 70
                                                                                                                                                            MIA HUMAN STANDARD; PRT; 131 AA. 016674; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 15-SEP-2003 (Rel. 42, Last annotation update) Melanoma derived growth regulatory protein precursor (Melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
DISULFID
SEQUENCE
   Blesch A.,
                 SEQUENCE FROM N.A., AND PARTIAL SEQUENCE. MEDLINE=95007612; PubMed=7923218;
                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                      Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        analysis, and chromosomal mapping.";
Genomics 66:242-248(2000).
-!- SUBCELLULAR LOCATION: Secreted (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; "A novel conserved cochlear gene, OTOR: identification, expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
NCBI_TaxID=8400;
                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF233519; AAF82728.1; -. HSSP; Q16674; IIIJ.
                                                                                                                                                       inhibitory activity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signal; SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
-!- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20334619; PubMed=10873378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                129 DFYCD 133
                                                                                                                                                                                                                                                                                                                                                                              124 DFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                               69 VYIYTKLVKENDDAGEFWSGSVYSDQYRDQQGLVGYFPSSLVTELTVYKDELQELPTTAV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                   99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12 LVALCAG-----HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQ 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VIVICIGFIHQKAYGVYMQKISDKKICADDECIYAISFGRAEDDYNAPDCRFVNIKKGEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                 IYVYSKLVTEN-GAGAFWAGSVYGD-HQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PS50002; SH3; 1.
Bosserhoff A.-K., Apfel R., Behl C., Hessdoerfer B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15243 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59.8%; Score 404; DB 1; 56.0%; Pred. No. 4.3e-34; tive 28; Mismatches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
CTORAPLIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25440C1A3CF911AE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  68
```

```
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.M.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.M.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Wiltial D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Wilting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Hopkins M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Butterfield Y.S.M., Krzywinski M.I., Skalska U., Smailus D.E.,

Butterfield Y.S.M., Krzywinski M.I., Skalska U., Smailus D.E.,

"Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences.",

"Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences.",
                              MIM; 601340; -.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0008283; P:cell proliferation; TAS.
                                                                                                                                                                                                                                                                                                                                                                EMBL; X75450; CAA53203.1; -.
EMBL; X84707; CAA59195.1; -.
EMBL; BC005910; AAH05910.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for comment entities requires a license agreement (See http://www.isb-sib.ch/annouentities a license agreement (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           recently identified family of secreted proteins.";

Proc. Natl. Acad. Sci. U.S.A. 98:5515-5520(2001).

-i- FUNCTION: ELICITS GROWTH INHIBITION ON MELANOMA CELLS IN VITRO
AS WELL AS SOME OTHER NEUROECTODERMAL TUMORS, INCLUDING GLIOMAS.

-i- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Structure and promoter analysis of the gene encoding the human melanoma-inhibiting protein MIA.";
J. Biol. Chem. 271:490-495(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=96132947; PubMed=8550608;
Bosserhoff A.-K., Hein R., Bogdahn U., Buettner R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schmitt A., Jachimczak P., Lottspeich F., Buettner R., Bogdahn U., "Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA.";
                                                                                                                                                                                Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lougheed J.C., Holton J.M., Alber T., Bazan J.F., Handel T.M., "Structure of melanoma inhibitory activity protein, a member of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=21244635; PubMed=11331761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cancer Res. 54:5695-5701(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY (1.39 ANGSTROMS) OF 25-131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSUE=Placenta;
                                                                                                                                                                                                               ; I38019; I38019.
; IIIJ; 16-MAY-01.
; 1HJD; 29-JAN-02.
; 1KOX; 24-JUL-02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE SPECIFICITY: ALL MALIGNANT MELANOMA CELL LINES TESTED AND INFREQUENTLY IN GLIOMA CELL LINES.
PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE MIA / O SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                    BC005910; AAH05910.1; -.
                                                                                                                                                                            HGNC:7076; MIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           commerci
```

PF00018;

```
문
                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                     01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Melanoma derived growth regulatory protein precursor (Melanoma inhibitory activity) (Cartilage-derived retinoic acid-sensitive protein) (CD-RAP).
MIA OR CDRAP.
                                                                                                                                                                                                                         BOVIN
   "Cloning of a retinoic" acid-sensitive mRNA expressed in car during chondrogenesis.";
J. Biol. Chem. 27:1:3311-3316(1996).
-!- FUNCTION: MAY FUNCTION DURING CARTILAGE DEVELOPMENT AND MAINTENANCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAND
STRAND
HELIX
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                 Dietz U.H., Sandell L.J.;
"Cloning of a retinoic acid-sensitive mRNA expressed in cartilage and
                                                                                                 Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                MIA_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                        STRAND
HELIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TURN
STRAND
HELIX
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAND
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Growth factor; Signal; SH3 domain; 3D-structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3; 1.
                                                    MEDLINE=96216414; PubMed=8621736; Dietz U.H., Sandell L.J.;
                                                                                        NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAND
                                                                                                                                                                                                                                                                                                                                                                                   Local
SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                              114 ATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                            117 GKVDVKTDKWDFYCQ 131
                                                                                                                                                                                                                                                                                                 60 RFLTIHRGQVVYVFSKL---KGRGRLFWGGSVQGDYYGDLAARLGYFPSSIVREDQTLKP 116
                                                                                                                                                                                                                                                                                                                   56 RFINVKKGQQIYVYSKLVTENGAG-AFWAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                        Н
                                                                                                                                                                                                                                                                                                                                                                           60;
                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                      MARSLV-CLGVIILLSAFSGPGVRGGPMPKLADRKLCADQECSHPISMAVALQDYMAPDC
                                                                                                                                                                                                                                                                                                                                                        MARILILLLGGLVALCA--GHGMF---MDKLSSKKLCADEECVYTISLARAQEDYNAPDC
                                                                                                                                                                                                                                                                                                                                                                                                               131 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                         40.88;
                                                                                                                                                                                                                                                                                                                                                                                                              14509 MW; 4D3BB30BD6008BDC CRC64;
                                                                                                                                                                                                                                                                                                                                                                           27; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                                                                                                                                                                                                                                                                                                                                                            Score 275.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MELANOMA DERIVED GROWTH REGULATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROTEIN.
                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                  No. 4.6e-21;
                                                                                                                                                                                                                 130
                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                        37; Indels
                                                                                                                                                                                                                                                                                                                                                                                           Length 131;
                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                      59
                                                                                                                                                                                                                                                                                                                                                                           6
```

```
PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q62946; P97591; Q62946; P97591; Q62946; P97591; Q62946; P97591; Q62946; P97591; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094; Q62094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; Q166/4; .....
InterPro; IPR001452; SH3.
Pfam; PF00018; SH3; 1.
SMART; SN00326; SH3; 1.
SMART; SN00326; SH3; 1.
PROSITE; PS50002; SH3; 1.
Growth factor; Signal; SH3 domain.
Growth factor; Signal; SH3 domain.
Growth factor; France FRITT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                    SEQUENCE OF 34-124 FROM N.A. TISSUE=Cartilage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                     Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- INDUCTION: Repressed by retinoic acid.
-!- PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
-!- SIMILARITY: BELONGS TO THE WIA / OTOR FAMILY.
-!- SIMILARITY: Contains 1 SH3 domain.
                                            MEDLINE=96216414; PubMed=8621736;
                                                                                                                                                                                                                                                                  mammary
                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-Sprague-Dawley; TISSUE-Mammary gland;
                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                     "Gene expression changes associated with chemically-induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MIA RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U51437; AAC48523.1; -. HSSP; Q16674; 111J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE SPECIFICITY: CARTILAGE PRIMORDIA AND CARTILAGE.
U.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   114 ATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56 RFINVKKGQQIYVYSKLVTENGAG-AFWAGSVYGDHQ-DEMGIVGYFPSNLVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MARILILLIGGLVALCA-----GHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDC
                                                                                                                                                                                                                                                                  carcinogenesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              h 39.9%; Score 270; DB 1; Similarity 44.4%; Pred. No. 1.7e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AKTOVKTDIWDFYCQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RFLTIHQGQVVYIFSKL---KGRGRLFWGGSVQGDYYGDGAARLGYFPSSIVREDQTLKP 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAWSLVFL--GVVLLSAFFGPSAGGRPMPKLADRKMCADEECSHPISVAVALQDYVAPDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               130
        Sandell L.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 £
2 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14353 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SH3.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MELANOMA DERIVED GROWTH REGULATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95D153161C78E02A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39; Indels 12; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58
```

```
MIA_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              믕
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DISULFID
DISULFID
CONFLICT
                                                                                                                                                            MIA MOUSE STANDARD; PRT; 130 AA.

G1865; 009086; P97495;
01-NOV-1997 (Rel. 35, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Melanoma derived growth regulatory protein precursor (Melanoma inhibitory activity) (Cartilage-derived retinoic acid-sensitive
MEDLINE=95007612; PubMed=7923218;
                SEQUENCE FROM N.A. STRAIN=BALB/c;
                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                              NCBI_TaxID=10090;
                                                                                                                  Mus musculus (Mouse)
                                                                                                                                                  protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U51438; AAC52481.1; -.
EMBL; U67884; AAB40659.1; -.
HSSP; Q16674; 111J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- TISSUE SPECIFICITY: CARTILAGE PRIMORDIA AND CARTILAGE
-!- INDUCTION: Repressed by retinoic acid.
-!- PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. Biol. Chem. 271:3311-3316(1996).
-!- FUNCTION: MAY FUNCTION DURING CARTILAGE DEVELOPMENT AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Cloning of a retinoic acid-sensitive mENA expressed in cartilage and during chondrogenesis.";
                                                                                                                                   MIA OR CDRAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY. -!- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00018; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           interPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MAINTENANCE.
                                                                                                                                                                                                                                                                                                                                              123 DEWDFYCQ 130
                                                                                                                                                                                                                                                                                                                                                                             121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                             66
                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         factor; Signal; SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 VLLGIVILSVFSGLSRADRAMPKLADRKLCÅDEECSHPISMAVALQDYVÅPDCRFLTIYR 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 LLGGLVALCAGHGM-----FMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                             GQVVYYFSKL---KGRGRLFWGGSVQGDYYGDLAAHLGYFPSSIVREDLTLKPGKVDMKT 122
                                                                                                                                                                                                                                                                                                                                                                                                                                           GQQIYVYSKLVTENGAG-AFWAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                  (CD-RAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58
58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            112
40
129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14536 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 268; DB 1;
Pred. No. 2.7e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY.
MA -> VT (IN REF. 2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MELANOMA DERIVED GROWTH REGULATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5F99149AECF74501 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ه.
```

```
VAV_RAT
                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                     밁
                                                                                                                                                                              Ş
                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                    Ş
                                 RESULT 9
                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                      Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=129/SV;
MEDLINE=97251341; PubMed=9097023;
Bosserhoff A.K., Kondo S., Moser M., Dietz U., Copeland N.G.,
Bosserhoff A.K., Kondo S., Moser M., Dietz U., Copeland N.G.,
Gilbert D.J., Jenkins N.A., Buettner R., Sandell L.J.;
"Mouse CD.RAP/MIA gene: structure, chromosomal localization, and
expression in cartilage and chondrosarcoma.";
Dev. Dyn. 208:516-525(1997).
Dev. Dyn. 208:516-525(1997).
The Come OTHER NEUROECTODERMAL TUMORS, INCLUDING GLICMAS (B
                                                                                                                                                                                                                                                                                                                                                                       DISULFID CONFLICT
VAV_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X94322; CAA63983.1; -.
EMBL; U85612; AAB82082.1; -.
EMBL; U9565; CAA66608.1; -.
HSSP; Q16674; 1110.
HSSP; Q16674; 1110.
HSSP; Q16674; HANGD; MGI:109615; Mia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Blesch A., Bosserhoff A.-K., Apfel R., Behl C., Hessdoerfer B., Schmitt A., Jachimczak P., Lottspeich F., Buettner R., Bogdahn U.; "Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00326; SH3; 1.

PROSITE; PS50002; SH3; FALSE_NEG.

Growth factor; Signal; SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY).

-:- SUBCELLULAR LOCATION: Secreted.

-:- TISSUE SPECIFICITY: ALL MALIGNANT MELANOMA CELL LINES.

INFREQUENTLY IN GLIOMA CELL LINES.

-:- PIM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.

-:- SIMILARITY: BELONGS TO THE MIA / OTCR FAMILY.

-:- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00018; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GO; GO:0007160; P:cell-matrix adhesion; IMP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cancer Res. 54:5695-5701(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001452;
                                                                                   123
                                                                                                                    121 TDIDFFCE 128
                                                                                                                                                                                   63 GQQIYVYSKLVTENGAG-AFWAGSYYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                      6 VLLGIVVLSVFSGPSRADRAMPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYR
                                                                                                                                                                                                                                                     8 LLGGLVALCAGHG-----MFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKK 62
                                                                                                                                                                                                                                                                                                        Similarity
                                                                                   DOWDFYCO 130
                                                                                                                                                     GOVVYVESKL---KGRGRLFWGGSVQGGYYGDLAARLGYFPSSIVREDLTLKPGKIDMKT
                                                                                                                                                                                                                                                                                                                                                         130 AA;
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                       42
35
58
112
 STANDARD;
                                                                                                                                                                                                                                                                                                      37.1%;
43.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                         112
                                                                                                                                                                                                                                                                                                                                                                                                                                                          130
                                                                                                                                                                                                                                                                                                                                                         14593 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SH3.
                                                                                                                                                                                                                                                                                      22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                        SH3.
BY SIMILARITY.
BY SIMILARITY.
TL -> NS (IN REF. 1).
                                                                                                                                                                                                                                                                                                      Score 251; DB 1;
Pred. No. 1.4e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
MELANOMA DERIVED
                                                                                                                                                                                                                                                                                                                                                                                                                                           PROTEIN.
                                                                                                                                                                                                                                                                                                                                                          16C957459C5BB5F9 CRC64;
                                                                                                                                                                                                                                                                                                                        DB 1; Length 130;
                                                                                                                                                                                                                                                                                      41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GROWTH REGULATORY
                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                        65
```

```
PRINTS; PRO0401; SH2DOMAIN.
PRINTS; PRO0452; SH3DOMAIN.
PRINTS; PRO0452; SH3DOMAIN.
PRINTS; PRO0452; SH3DOMAIN.
PRODOM; PRO0805; SH2; 1.
PRODOM; PD000056; SH3; 1.
PRODOM; PD000066; SH3; 1.
SPART; SM00109; C1; 1.
SWART; SM00109; C1; 1.
SWART; SM00033; CH; 1.
SWART; SM00033; RhGGEF; 1.
SWART; SM00326; SH3; 2.
SWART; SM00326; SH3; 2.
SWART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proliferation.

SUBUNIT: Interacts with SLA (By similarity).

PTM: Phosphorylated on tyrosine residues.

SIMILARITY: Contains 1 calponin-homology (CH) domain.

SIMILARITY: Contains 1 DBL-homology (DH) domain.

SIMILARITY: Contains 1 PH domain.

SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG binding domain.

SIMILARITY: Contains 1 SH2 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/an or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Song J.S., Haleem-Smith H., Arudchandran R., Gomez J., Scott P.M., Mill J.F., Tan T.-H., Rivera J., "Tyrosine phosphorylation of Vav stimulates IL-6 production in mast cells by a Rac/c-Jun N-terminal kinase-dependent pathway.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
PROSITE; PS50021; CH; 1.
PROSITE; PS00479; DAG PE BIND DOM 1; 1.
PROSITE; PS50081; DAG PE BIND DOM 2; 1.
PROSITE; PS50010; DH 2; 1.
PROSITE; PS00741; DH 1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vav proto-oncogene VAV1 OR VAV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U39476; AAA98606.1; -. HSSP; P29354; IGRI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Immunol. 163:802-810(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=99323974; PubMed=10395673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P54100;
                                                                                                                                                                                                                                                                             Pfam; PF00017; SH2; Pfam; PF00018; SH3;
                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00307; CH;
                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000219; RhoGEF.
InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
InterPro; IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001331;
InterPro; IPR001849;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR003247; CH_type.
InterPro; IPR002219; DAG_PE-bind.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [nterPro; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: Couples tyrosine kinase signals with the activation of the Rho/Rac GTPases, thus leading to cell differentiation and/or
                                                                                                                                                                                                                                                                                                                                PF00130; DAG PE-bind; 1. PF00169; PH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PR00171
                                                                                                                                                                                                                                                                                                               RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5; Calponin-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (p95).
                                                                                                                                                                                                                                                                                                                                                                                                                                                              GDS_CDC24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a collaboration
```

```
VAV_MOUSE
           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOTTOTION OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                              receptor signaling.";
J. Exp. Med. 191:463-474(2000).
-:- FUNCTION: Couples tyrosine kinase signals with the activation the Rho/Rac GTPases, thus leading to cell differentiation and/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=91172176; PubMed=2005887; Katzav S., Cleveland J.L., Heslop H.E., Pulido D.; Katzav S., Cleveland J.L., Heslop H.E., Pulido D.; "Loss of the amino-terminal helix-loop-helix domain of the vav proto-oncogene activates its transforming potential."; mol. Cell. Biol. 11:1912-1920(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VAV_MOUSE STANDARD; PRT; 845 AA. P27870; O1-AUG-1992 (Rel. 23, Created) O1-AUG-1992 (Rel. 23, Last sequence update) 15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                        MEDLINE=20130290; PubMed=10662792;
Sosinowski T., Pandey A., Dixit V.M.,
"Src-like adaptor protein (SLAP) is a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Adams J.A., Houston H., Allen J., Lints T., Harvey R., "The hematopoletically expressed vav proto-oncogene shares homology with the dbl GDP-GTP exchange factor, the bor gene and a yeast gene (CDC24) involved in cytoskeletal organization.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE=92228488; PubMed=1565462;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vav proto-oncogene VAV1 OR VAV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proto-oncogene; Phorbol-ester binding; Zinc; SH2 domain; SH3 domain; Guanine-nucleotide releasing factor; Repeat; Phosphorylation.

1 119 CH.

DOMAIN 194 373 DH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 1-93 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                               NTERACTION WITH SLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
TISSUE SPECIFICITY: Widely expressed in hematopoietic cells not in other cell types.

PTM: Phosphorylated on tyrosine residues (By similarity).

SIMILARITY: Contains 1 calponin-homology (CH) domain.

SIMILARITY: Contains 1 DBL-homology (DH) domain.

SIMILARITY: Contains 1 PH domain.

SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                 SUBUNIT: Interacts with SLA.
                                                                                                                                                                                                                    proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          834 YVEED--YSE 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS50003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7:611-618(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS50002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                194
402
516
615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; PH_DOMAIN; 1.
; SH2; 1.
; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97953 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Score 93.5; DI; Pred. No. 0.1; 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PH.
PHORBOL-ESTER I
SH3 1.
SH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SH3 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C4A5CACD45FCB80E CRC64;
                                                                                                                                                                                                                                                                                                                                                Weiss A.;
negative regulator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 843;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BINDING
                                                                                                                                                                                                                                                                                                                                                              of
T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
```

```
Matches
             Query Match
Best Local :
                                                                                                                                                                                       PROSITE; PS00479; DAG PE BIND DOM PROSITE; PS50081; DAG PE BIND DOM PROSITE; PS50010; DH 2; 1.

PROSITE; PS50014; DH 1; 1.

PROSITE; PS50001; PH DOMAIN; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                         PRINTS; PRO0401; SH2DOMAIN.
PRINTS; PRO0452; SH3DOMAIN.
PRINTS; PRO0888; SM22CALPONIN.
PRODOM; PD0001527; CH type; 1.
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
                                                           DOMAIN
CONFLICT
                                                                                                                                                                                                                                                                                                                                               ProDom;
SMART; S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             binding domain.
-!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
                                                SEQUENCE
                                                                                                                                                                                                                                                                                                              SMART;
                                                                                                                                                                                                                                                                                                                         SMART; SM0023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00130; DAG_PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; M59833; AAA63402.1; -. PIR; A61187; TVMSVV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                    DOMAIN
                                                                                                DOMAIN
                                                                                                           DOMAIN
                                                                                                                     DOMAIN
                                                                                                                                  DOMAIN
                                                                                                                                             DOMAIN
                                                                                                                                                                  Guanine-nucleotide
                                                                                                                                                                             Proto-oncogene;
                                                                                                                                                                                                                                                                          PROSITE; PS50021; CH;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH type.
InterPro; IPR002219; DAG_PB-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001349; PH.
InterPro; IPR001849; PH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGD; MGI:98923; Vav1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSFAC; T01230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; X64361; CAA45713.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nterPro;
                                                                                                                                                                                                                                                                                    SM00325; RhoGEF; 1
SM00252; SH2; 1.
SM00326; SH3; 2.
              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR000219; RhoGEF.
IPR000980; SH2.
                                                845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-DEC-02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JAN-03.
                                                                        194
402
516
617
671
782
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 SH2;
SH3;
                                               Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                        RhoGEF; 1.
                                                                                                                                                                 Phorbol-ester binding; Zinc; de releasing factor; Repeat;
                                                                      119
373
504
564
660
765
842
                                                98136 MW;
             13.8%; Score 93.5; 32.9%; Pred. No. 0.
                                                                                                                                                                                                                                                 BIND_DOM_1; 1.
BIND_DOM_2; 1.
14; Mismatches
                                                        PHORBOL-ESTER AND DAG BINDING.
SH3 1.
SH2 2.
SH3 2.
Q -> E (IN REF. 2).
                                                3666DCCD1C5229DA CRC64;
                        DB 1;
 20; Indels
                                                                                                                                                                 Phosphorylation;
                                                                                                                                                                             SH2 domain; SH3 domain,
                        Length 845;
  13;
Gaps
 u
--
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
            VAV3_MOUSE
Q9R0C8;
                                                                                                                                                                                  InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SIMILARITY: Contains 1 calponin-homology (CH) domain.
-!- SIMILARITY: Contains 1 DBL-homology (DH) domain.
-!- SIMILARITY: Contains 1 PH domain.
-!- SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trenkle T., McClelland M., Adlkofer K., Welsh J.;
"Major transcript variants of VAV3, a new member o
guanine nucleotide exchange factors.";
Gene 245:139-149(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOUSE
                                                                                                                                                                                                                                               MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                binding domain.
-!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VAV3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vav-3 protein
PRINTS; PR00401;
                                                                                                                                                                                                                                                                            EMBL; AF067816; AAF09171.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20179693; PubMed=10713454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                        InterPro;
                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                      InterPro;
                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND, TO A LESSER EXTENT, RAC-1. BINDS PHYSICALLY TO THE NUCLEOTIDE-FREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=Beta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=Alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATES OF THOSE GTPASES (BY SIMILARITY).
                                                                                                                                                                                                                                               MGI:1888518; Vav3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44
                                                                                                                                                                                                                                                               P29355; 1SEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IsoId=Q9R0C8-2; Sequence=Not described;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IsoId=Q9R0C8-1; Sequence=Displayed;
                                                                                                                                                                ); IPR001715; Calponin-like.
); IPR003247; CH type.
); IPR003219; DAG_CB-bind.
); IPR001331; GDS_CC24.
); IPR001849; PH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YVEED--YSE 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                                     IPR000219; RhoGEF.
IPR000980; SH2.
IPR001452; SH3.
IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
SH2DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of the VAV family
```

```
VAV_HUM
   무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00325; RhoGEF; 1.

SMART; SM00325; SH2; 1.

SMART; SM00252; SH2; 1.

SMART; SM00326; SH3; 2.

SMO0326; SH3; 2.

PROSITE; PS500021; CCH; 1.

PROSITE; PS50001; DAG_PE_BIND_DOM_2; 1.

PROSITE; PS50001; DH_2; 1.

PROSITE; PS500001; DH_1; 1.

PROSITE; PS500001; SH2; 1.

PROSITE; PS500001; SH2; 1.

PROSITE; PS500001; SH2; 1.

PROSITE; PS500001; SH3; 2.

PHODEDO1-ester binding; Zinc; SH2 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00452; SH3DOMAIN.
PRINTS; PR00888; SM22CALPONIN.
ProDom; PD001527; CH type; 1.
ProDom; PD000093; SHZ; 1.
ProDom; PD000066; SH3; 1.
SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                       HUMAN
                                                                                      WEDLINE=90005432; PubMed=2477241;
Katzav S., Martin-Zanca D., Barbacid M.;
"vav, a novel human oncogene derived from a locus ubiquitously
expressed in hematopoietic cells.";
                                                                                                                                                                                                                                                                                                                                        P15498; Q15860;
01-APR-1990 (Rel. 14, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
DOMAIN
                                                                                                                                                                            Denkinger D.J., Borges C.R., Shaw C.L., Cushman A.M., Ka "Transcriptional regulation of the vav proto-oncogene."; Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                 VAV1 OR VAV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART;
 Katzav S., C
                           MEDLINE=91172176; PubMed=2005887;
                                                                          EMBO J. 8:2283-2290(1989).
                                                                                                                                                                                                                                                                                                                               Vav proto-oncogene.
                                                                                                                                                                                                                                                                                                                                                                                                         VAV HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                           EQUENCE OF 1-61 FROM N.A.
                                                                                                                                                  EQUENCE OF 62-845 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101 PSNLVRE 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            790 LGIAIARYDFCARDMRELSLLXGDMVKIYTKM----SANGWWRGEVNGR------VGWF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ne-nucleotide releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM0023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PSTYVEE
Cleveland J.L., Heslop H.E., Pulic he amino-terminal helix-loop-helix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 847 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119
371
502
562
660
766
                                                                                                                                                                                                                                                                      Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97946 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      factor; Alternative splicing. CH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 93.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SH2 domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PHORBOL-ESTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PH
                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9A6B63F0D9E60F8F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No. 0.1;
                                                                                                                                                                                                                                                                                                                                                                                                         845
Pulido D.;
nelix domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SH3 domain; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DAG BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 847;
of the
                                                                                                                                                                                                        Kawahara R.S.;
vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
TEME;
                                                                                                                                                EMBL;
                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   binding domain.
-!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
-!- CAUTION: Ref.2 sequence differs from that shown due to frameshifts in position 322 and 355.
                                                                                                                                                                                                                                                                                                                                                        EMBL; AF030227; AAC25011.1; EMBL; AF030201; AAC25011.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oncogene 7:611-618(1992).
-!- FUNCTION: Couples tyrosine kinase signals with the activation of the Rho/Rac GTPases, thus leading to cell differentiation and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=96038895; PubMed=7478592; Ramos Morales F., Romero F., Schweighoffer F., Bismuth G., Camonis J., Tortolero M., Fischer S., Tortolero M., Fischer S., "The proline-rich region of Vav binds to Grb2 and Grb3-3."; Oncogene 11:1665-1669(1995).
                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adams J.M., Houston H., Allen J., Lints T., Harvey R.;
"The hematopoletically expressed vav proto-oncogene shares homology with the dbl GDP-GTP exchange factor, the bor gene and a yeast gene (CDC24) involved in cytoskeletal organization.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 299-334 FROM N.A. MEDLINE=96038895; PubMed=7478592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oncogene activates its transforming potential.";
Mol. Cell. Biol. 11:1912-1920(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=92228488; PubMed=1565462;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY TO CDC24 FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 299-837 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: Contains 1 calponin-homology (CH) domain.
SIMILARITY: Contains 1 DBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOT IN OTHER CELL TYPES.

PTM: Phosphorylated on tyrosine residues.

MISCELLANEOUS: 'Vav' stands for the sixth letter of the Hebrew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proliferation. SUBUNIT: Interacts with SLA (By similarity). Interacts with Grb2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE SPECIFICITY: WIDELY EXPRESSED IN HEMATOPOIETIC CELLS BUT
                                                                                                                                                                                                                                                                                                            AF030204;
                                                                                                                                                                                                                                                                        AAC25011.1; JOINED.
AAC25011.1; JOINED.
AAC25011.1; JOINED.
AAC25011.1; JOINED.
AAC25011.1; JOINED.
AAC25011.1; JOINED.
                                 AAC25011
                                                                                                                                                                                AAC25011
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
JOINED
```

```
Ś
                            밁
                                                  8
                                                                                                                              Matches
                                                                                                  Query Match
                                                                                                                                                                                                                                                                              PROSITE; PS00479; DAG_PE_BIND_DOM_1; 1.
PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.
PROSITE; PS500101; DH_2; 1.
PROSITE; PS500141; DH_1; 1.
PROSITE; PS50001; PH_DOMAIN; 1.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF030224; AAC25011.1; JOINED.
EMBL; AF030225; AAC25011.1; JOINED.
EMBL; AF030226; AAC25011.1; JOINED.
EMBL; X16316; CAAA14383.1; ALT_FRAME.
EMBL; M59834; AAA63267.1; -.
EMBL; X83931; CAA58783.1; -.
PIR; B39576; TVHUVV.
                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
SMART; SM000233; PH; 1.
SMART; SM00025; RhoGEF; 1.
SMART; SM00025; SH2; 1.
SMART; SM00025; SH3; 2.
                                                                                                                           DOMAIN
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PRO0452; SH3DOMAIN.
PRINTS; PR00388; SM22CALPONIN.
ProDom; PD001527; CH type; 1.
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAIN; 1040/5; -.
GO: GO:0003700; F:transcription factor activity; TAS.
GO; GO:0007048; P:oncogenesis; TAS.
InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH type.
InterPro; IPR003247; CH type.
InterPro; IPR003219; DAG PE-bind.
InterPro; IPR00321; GDS CDC24.
                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
InterPro;
                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP; P29354; 1GRI.
TRANSFAC; T00880; -.
Genew; HGNC:12657; VAV1.
                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                        Juanine-nucleotide
                                                                                                                                                                                                                                                                   Proto-oncogene;
                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00401; SH2DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
 104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164875;
                                                44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                         Similarity
                        AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----VGWFPAN 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR001452; SH3.
IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR000219; RhoGEF. IPR000980; SH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR001849; PH.
                                                                                                                              845 AA;
                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; DAG_PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SH2; 1.
SH3; 2.
                                                                                                                                                                                                                                                   Phorbol-ester binding; Zinc; SH2 domain; SH3 domain; ide releasing factor; Repeat; Phosphorylation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RhoGEF; 1.
                                                                                                                                                                                                                                         releasing factor; 119 CH.
                                                                                                                       964 A -> P (IN REF. 2).
118 I -> TV (IN REF. 2).
98313 MW; AC3BC9736FD2F138 CRC64;
                                                                                   13.5%; Score 91.5; DB 1; 32.9%; Pred. No. 0.16;
                                                                            14;
                                                                                                                                                              SH3 2.
                                                                                                                                                                            SH3
SH2.
                                                                                                                                                                                                    PHORBOL-ESTER AND DAG BINDING
                                                                            Mismatches
                                                                           20;
                                                                                                 Length 845;
                                                                          Indels
                                                                        13;
                                                                        Gaps
```

밁

836 YVEED--YSE 843

```
DAPERTAR REPRESENTATION OF THE TOP OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROP
                                                                                 InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH type.
InterPro; IPR003219; DAG PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001849; PH.
InterPro; IPR0001849; RhoGEF.
InterPro; IPR0001849; RhoGEF.
InterPro; IPR0001845; SH3.
InterPro; IPR001845; SH3.
InterPro; IPR001845; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VAV3_HUMAN STANDARD; PRT; 8
095230; Q9Y5X8;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence up
28-FEB-2003 (Rel. 41, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUB=Breast, and Colon carcinoma;

WEDLINE=98371222; PubMed=9705494;

Trenkle T., Welsh J., Jung B., Mathieu-Daude F., McClelland M.;

"Non-stoichiometric reduced complexity probes for cDNA arrays.";

Nucleic Acids Res. 26:3883-3891(1998).

-I- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA, RHOG AND,

-TO A LESSER EXCENT, RAC-1. BINDS PHYSICALLY TO THE NUCLEOTIDE-FREB
STRIES OF THOSE GTPASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Movilla N., Bustelo X.R.; Biological and regulatory properties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING. MEDLINE=99455043; PubMed=10523675;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vav-3 protein.
                                                                                                                                                                                                                                                                                                                                                                99,
MIM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genew; HGNC:12659; VAV3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P29355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF118887; AAD20349.1; -. EMBL; AF118886; AAD20348.1; -. EMBL; AF067817; AAC79695.1; -.
                                                           InterPro; IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ISOId=Q9UKW4-2; Sequence=VSP_001820;
SIMILARITY: Contains 1 calponin-homology (CH) domain.
SIMILARITY: Contains 1 DBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 PH domain phorbol-ester and DAG binding domain.
                                                                                                                                                                                                                                                                                                                                    GO:0005096; F:GTPase activator activity; TAS.
GO:0005070; F:SH3/SH2 adaptor protein activity; TAS.
GO:0007264; P:small GTPase mediated signal transduction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Name=Alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                               605541;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=Q9UKW4-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of oncoproteins.";
Biol. 19:7870-7885(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ISEM.
      CH;
_PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of Vav-3, a new member of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $
```

```
REAL SOCIO
                                                                                                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                    Ś
                                                                                                                                                          RESULT 14
                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS50021; CH; 1.

PROSITE; PS00479; DAG PE BIND_DOM_2; 1.

PROSITE; PS50001; DAG PE BIND_DOM_2; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50001; DH 1; 1.

PROSITE; PS50003; PH_DOMAIN; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                   CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                          060952;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last seq
28-FEB-2003 (Rel. 41, Last ann
                                                                                                                                      _MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00017; SH2; 1
Pfam; PF00018; SH3; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProDom; PD001527; CH type;
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PROOSSS;
                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Guanine-nucleotide releasing
                                                                                                                                                                                                                                                                                                                                                                                                                VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Phorbol-ester binding; Zinc;
 SEQUENCE FROM N.A.
STRAIN=C57BL/6;
                             NCBI_TaxID=10090;
                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                               Mus musculus (Mouse)
                                                                                 Vav-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                      MOUSE
                                                                                                                                                                                          839
                                                                                                                                                                                                             101
                                                                                                                                                                                                                                  790 LGIAIARYDFCARDMRELSLLKGDVVKIYTKM----SANGWWRGEVNGR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PF00169;
                                                                                                                                                                                                                                                     41 ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SM00252; SH2; 1.
SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SM00325; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SM00233; PH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SM00033; CH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SM00109;
                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                            PSNLVRE 107
                                                                                                                                                                                         PSTYVEE
                                                                                                                                                                                                                                                                                                                  107
217
298
429
847
                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                     A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PH; 1.
                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM22CALPONIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SH3DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SH2DOMAIN.
                                                                                                                                                                                          845
                                                                                                                                                                                                                                                                                                                     97775 MW;
                                                                                                                                                                                                                                                                                     13.5%; Score 91.5; DB 32.8%; Pred. No. 0.16;
                                                                                            Last sequence up
                                                                                                                                                                                                                                                                            13; Mismatches
                                                                                                                                                                                                                                                                                                                    P (in isoform Beta).
/FIId=VSP 001820.

K -> E (IN REF. 2).
Y -> H (IN REF. 1; AAD20348).
T -> S (IN REF. 2).
V -> A (IN REF. 1; AAD20348).
V -> A (IN REF. 2).
M; C1E29F0B094CB721 CRC64;
                                                                                                       sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         factor; Alternative splicing. CH.
                                                                                                                                                                                                                                                                                                                                                                                             CETFGMRKSELFEAFDLFDVRDFGK -> MQLPDCPCRAHL
                                                                                                                                                                                                                                                                                                                                                                                                        MEPWKQCAQWLIHCKVLPTNHRVTWDSAQVFDLAQTLRDGV
LLCQLLNNLRAHSINLKEINLRPQMSQFLCLKNIRTFLTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SH2 domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHORBOL-ESTER
                                        Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                       868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SH3 domain; Repeat;
                                                                                                                                       8
                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND
                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                Length 847;
                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                            BINDING
                                                     Euteleostomi;
                                                                                                                                                                                                                                                                              11;
                                                                                                                                                                                                                                     88
```

```
PRINTS; PRO0401; SH2DOMAIN.
PRINTS; PRO0452; SH3DOWAIN.
PRODOM; PD001527; CH type; 1.
ProDom; PD001093; SH2; 1.
ProDom; PD0000066; SH3; 2.
SMART; SM00109; C1; 1.
SMART; SM00109; C1; 1.
SMART; SM001033; CH; 1.
SMART; SM00233; PH; 1.
SMART; SM00233; PH; 1.
SMART; SM00326; SH3; 2.
SMART; SM00326; SH3; 2.
                                                                                                                                                                                           PROSITE; PS50021; CH; 1.
PROSITE; PS500479; DAG PE BIND DOT
PROSITE; PS50081; DAG PE BIND DOT
PROSITE; PS50081; DH 2; 1.
PROSITE; PS00741; DH 1; 1.
PROSITE; PS50003; PH DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of Ras-related GTPases (By similarity).

-!- SIMILARITY: Contains 1 calponin-homology (CH) domain.
-!- SIMILARITY: Contains 1 DBL-homology (DH) domain.
-!- SIMILARITY: Contains 1 PH domain.
-!- SIMILARITY: Contains 1 zinc-dependent phorbol-ester and
                                               DOMAIN
DOMAIN
                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
      MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family of proto-oncogenes.";
Oncogene 13:363-371(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=96313271; PubMed=8710375;
Schuebel K.E., Bustelo X.R., Nielsen D.A., Song B.J., Barbacid M.,
                                MOD_RES
                                                                           DOMAIN
                                                                                                                  DOMAIN
                                                                                                                             DOMAIN
                                                                                                                                           Guanine-nucleotide
                                                                                                                                                                  PROSITE; PS50001; SH2; 1. PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00169; PH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG_PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U37017; AAC52761.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goldman D., Lee I.J.;
                                                                                                                                                       Phorbo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Isolation and characterization of murine vav2, a member of the vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                binding domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: Guanine nucleotide exchange factor for the Rho family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGI:102718; Vav2
                                                                                                                                                                                                                                                                                                                                                                                                                        PF00018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q60631; 1GBQ.
                                                                                                                                                       -ester binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR001715; Calponin-like.
IPR003247; CH type.
IPR002219; DAG PE-bind.
IPR001331; GDS CDC24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR000219; RhoGEF.
IPR000980; SH2.
IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR001849; PH
                                                 193
400
514
576
806
          159
                                                                                                                                                                                                                                                                                                                                                                                                                       SH2; 1.
SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 RhoGEF; 1.
                                                 119
371
502
562
642
757
867
                                                                                                                                        releasing
          159
                                                                                                                                                       Zinc;
                                                                                                                                                                                                                                 BIND DOM 1; 1.
BIND DOM 2; 1.
                                                 PHORBOL-ESTER ASH3 1.
SH2.
SH3 2.
                                                                                                 SH2 domain; SH3 domain; factor; Repeat; Phosphorylation. CH. DH. PH.
         SIMILARITY).
PHOSPHORYLATION (BY EGFR) (BY
SIMILARITY)
                                   PHOSPHORYLATION (BY
                                                                                        AND
                                                                                        DAG
                                   EGFR)
                                   (BY
```

```
RESULT 15
VAV2_HUMAN
당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VAV2 HUMAN
P52735;
01-OCT-1996
                                                                                                                                                                                                                                                                                                                             -!- SIMILARITY: Contains 1 calponin-homology (CH) domain.
-!- SIMILARITY: Contains 1 DBL-homology (DH) domain.
-!- SIMILARITY: Contains 1 PH domain.
-!- SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22464432; PubMed=12454019;
Tamas P., Solti Z., Bauer P., Illes A., Sipeki S., Bauer A.,
Farago A., Downward J., Buday L.;
"Mechanism of epidermal growth factor regulation of Vav2, a guanine
"mechanism of epidermal growth factor regulation of Vav2, a guanine
nucleotide exchange factor for Rac.";
                                                                                                                                                                        the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commer
                                                   Genew;
                                                                                   EMBL; S76992; AAB34377.1; -. PIR; I51940; I51940.
                                                                                                                                      or send an email to license@isb-sib.ch).
                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                        J. Biol. Chem. 278:5163-5171(2003).
-I- FUNCTION: Guanine nucleotide exchange factor for the Rho family of Ras-related GTPases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sclerosis gene TSC1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Henske E.P., Short M.P., Jozwiak S., Bovey C.M., Ramlakhan S.,
Haines J.L., Kwiatkowski D.J.;
"Identification of VAVZ on 9g34 and its exclusion as the tuberous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vav-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PHOSPHORYLATION OF TYR-142; TYR-159 AND TYR-172.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ann. Hum. Genet. 59:25-37(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=95283235; PubMed=7762982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [SSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                 SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE SPECIFICITY: Widely expressed
                                                                                                                                                                                                                                                                                                                      binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  852 GRIGWFPSTYVEEEGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      802 VFTPRVIGTAVARYNFAARDMRELSLREGDVVKIYSRIGGDQG---WWKG-----ETN 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95 GIVGYFPSNLVREQRV 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38 VYT---ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEM 94
                                                 P08631; 1BU1.
HGNC:12658; VAV2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     868 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99915 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12.6%; Score 85.5; DB 28.9%; Pred. No. 0.67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHOSPHORYLATION (BY EGFR) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D18581E7EEB2DBC2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

MIM; 600428; -.

nterPro;

IPR001715; Calponin-like. IPR003247; CH_type.

```
밁
                                                                                                      Ş
                                                                                                                                          망
                                                                                                                                                                        Ś
Search completed: December 29, 2003, 16:04:14
Job time : 5.01961 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prime Prognof; CH; 1...

R Pfam; PF00130; DAG PE-bind; 1.

R Pfam; PF00169; PH; 1.

R Pfam; PF00169; PH; 1.

R Pfam; PF00161; RhoGEF; 1.

R Pfam; PF00017; SH2; 1.

Pfam; PF00017; SH2; 1.

Pfam; PF00018; SH3; 2.

R Pfam; PF00018; SH3; 2.

R Pfam; PF00018; SH3; 2.

R Pfam; PF00018; SH3; 2.

R Pf1NTS; PR00415; SH3DOMAIN.

R PT0Dom; PD000066; SH3; 2.

R Pr0Dom; PD000093; SH2; 1.

R PT0Dom; PD000093; SH2; 1.

R PT0Dom; P0000033; CH; 1.

R PT0Dom; PM00103; CH; 1.

R SMART; SM00125; RhoGEF; 1.

R SMART; SM00125; SH3; 2.

R SMART; SM00125; SH3; 2.

R SMART; SM00125; SH3; 2.

R SMART; SM00125; SH3; 2.

R PROSITE; PS50011; DAG PE BIND DOM_1; 1.

DR PROSITE; PS50010; DH—2; 1.

DR PROSITE; PS50010; DH—2; 1.

DR PROSITE; PS50001; PH—1; 1.

DR PROSITE; PS50001; SH2; 1.

DR PROSITE; PS50001; SH2; 1.

DR PROSITE; PS50001; SH3; 2.

R PROSITE; PS50001; SH3; 2.

R PROSITE; PS50001; SH3; 2.

R PROSITE; PS50001; SH3; 3.

R PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 2.

R PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 2.

R PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

DR PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50001; SH2; 1.
                                                                                                                                                                                                          Query Match 12.5
Best Local Similarity 27.6
Matches 21; Conservative
                                                                                                                                                                                                                                                                               MOD_RES
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000219; RhoGEF.
InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nterPro;
                                                                                                                                        862 GRIGWFPSTYVEEEGI 877
                                                                                                        95 GIVGYFPSNLVREQRV 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR002219; DAG PE-bind.
IPR001331; GDS_CDC24.
IPR001849; PH.
                                                                                                                                                                                                                                                                                  878 AA;
                                                                                                                                                                                                                                                                                                  198
524
586
673
816
1142
1729
                                                                                                                                                                                                                                                                               572

PHORBOL-ESTER AND DAG BINDING.
652

SH3 1.
767

SH3 2.

PHOSPHORYLATION (BY EGFR).
159

PHOSPHORYLATION (BY EGFR).
172

PHOSPHORYLATION (BY EGFR).
172

PHOSPHORYLATION (BY EGFR).
                                                                                                                                                                                                            12.5%; Score 84.5; DB 1; Length 878; 27.6%; Pred. No. 0.85; Live 20; Mismatches 22; Indels 1
                                                                                                                                                                                                                13;
```

75.5 75.5 75.5

Q9CGW7 Q9FU07 Q94E30 Q9ATQ5 Q9FU04

Q9T0C2 Q8TI46

Oggw7 lactococcus
Oggw7 lactococcus
Oggw7 oryza sativ
Og4e30 oryza sativ
Ogarg5 trificum ae
Ogfw04 oryza sativ
Ogarg5 streptomyce
Ogfw01 oryza sativ
Ogase5 streptomyce
Ogfw01 oryza sativ
Ogase5 streptomyce
Ogfw01 oryza sativ
Ogarg6 arabidopsis
Ogfw16 methanosarc
Ogjj15 mus musculu
Ogarg7 caenorhabdi
Ogmy10 dictyosteli
Olfs94 homo sapien
Og4685 allium asca
Og4ek5 allium wake
Og43366 allium cepa
Ogsyv1 allium cepa

Q9JJ15
Q93575
Q8MYI0
Q16584
Q817T4
Q94EK2
0 Q94EK5
0 Q94EK5

78.5 78.5 78.5 78.5

Q28616 Q9CXH0 Q9FTZ8 Q9H0H2 Q8N157 Q8N157

Q9h0h2 homo sapien Q8n157 homo sapien O93709 sulfolobus

Q28616 oryctolagus Q9vma7 drosophila

Q8uwe6 tetraodon n Q9cxh0 mus musculu

Q9ftz8 oryza sativ

Q9VMA7 Q8UWE6

```
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                               Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     December 29, 2003, 16:03:18 ; Search time 19.7199 Seconds (without alignments)
1674.996 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      676
1 MARILILLIGGLVALCAGHG.....RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                830525 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SPTREMBL_23:*
  123.6.0
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.1
123.6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp_archea:*
sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_plant:*
sp_rodent:*
sp_virus:*
sp_vertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sp_organelle:*
sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sp_tung1:*
sp_human:*
sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sp_mammal:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                                  Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fungi: *
                                               268
1239
137
137
119
119
1166
287
287
846
846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                258052604 residues
                                                                           111114
131111
                         Q9J109
Q8B184
Q8C899
Q9C2173
Q9C2173
Q96PC5
Q91ZV0
Q8R0766
Q8R0766
Q8R0776
Q8BTV7
Q8BTV7
Q8BTV7
Q8BTV7
Q8BTV7
                                                                                                                                                                                                                                                                                                                                                                                                                       ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
Q9ji09 mesocricetu
Q8bje9 mus musculu
Q8b184 mus musculu
Q8c899 mus musculu
Q9c899 mus musculu
Q9c9p5 homo sapien
Q9lzv0 mus musculu
Q90r076 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
Q8vdu4 mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                       Description
```

														_													
Db Qy	Que Bes Mat	SQ FT	F 7	돷뮻	DR R	尿	DR	קם אַכ	2 2	RT.	RT	RA :	א לא לא	5 2	P C					D t		J F		_ c	RESUL		
y 26 isskkicadebevytislaraqedynapdcrfinvkkgqqiyvyskivtengag-afwag :: : : : : : : : : : :	Query Match 34.7%; Score 234.5; DB 11; Length 96; Best Local Similarity 46.4%; Pred. No. 5.7e-18; Matches 45; Conservative 21; Mismatches 26; Indels 5; G	NON TER 96 SEQUENCE 96 AA; 1						EMBL; AF271694; AAF76220.1;	C -1- SIMILARITY: CONTAINS 1 SH3 DOMAIN.	melanoma cells.";	"Overexpression of MIA enhances extravasation and metastasis of	Jauch K. H. ;	Guba M.			Meso	Mammalia; Eutheria; Rodentia;	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E	Mesocricetus auratus (Golden hamster).	Melanoma inhibitory activity	or our room (Transmitted or our room and		CANTON CONTRACT OF	D 09JI09 PRELIMINARY; PRT; 96 AA.	RESULT 1	6	ALIGNMENTS
₩G G G	Gaps										A-mel:																

Q9VMA8

밁 Ş

5 8 85

SVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKT 94 SVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPT 120

N

PRELIMINARY;

268

Š

```
QBBJE9
ID
QBBJE9
ID
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBBJE9
QBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                            SON RELEASE OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PROCESS OF THE PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8BI84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                          Matches
                                                                                                                        Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8BJE9;
Q8BJE9;
01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the RIKEN Genome Exploration Research Group "Analysis of the mouse transcriptome based 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
EMBL, AK084344; BAG39164.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence updato
01-MAR-2003 (TrEMBLrel. 23, Last annotation upd
Weakly similar to NPIP-like protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=C57BL/6J; TISSUE=Eye;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                    the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs."; Nature 420:563-573 (2002).

EMBL; AK044749; BAG32064.1; -. SEQUENCE 1239 AA; 136350 MW; 6E16F9D42ECEFF05 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Weakly similar to NPIP-like protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8BI84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8BI84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Retina;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 HGMFMDKLSSKKLCADEECVYTISLARAGEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     79 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 127
            19
                                                                                       45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LELWAGSV--EHS----FGYFPKDLIKVLHKYTEEELHIPADETDFVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HGR---RESDLKVCGDEECSMLMYRGKALEDFTGPDCREVNFKKGDDVYVYYKLA--GGS
        HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                268 AA; 29722 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
                                                                                                                                31.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last annotation update)
                                                                                           13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 215; DB 11; Length Pred. No. 2.8e-15;
                                                                                                                                Score 215; DB 11;
Pred. No. 1.8e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67339C562F684402 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1239 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Group Phase I & II
based on functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39;
                                                                                                                                                                              Length 1239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12;
                                                                                                       12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ġ,
```

Matches

42;

Conservative

11; Mismatches

Indels

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SO DE REAL SO OCCUPANTO DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRESENTA DE PRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation
60,770 full-length cDNAs.";
Nature 420:563-573(2002).
EMBL, AK047965; BAC33202.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=C57BL/6J; TISSUE=Head;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Otoraplin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8C899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8C899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Similar to cartilage derived retinoic acid sensitive protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q921X3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q921X3
                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDRAP
                                                                                               InterPro; IPR001452; SH3.
Pf4m; PF0001B; SH3; 1.
SMART; SM0326; SH3; 1.
SEQUENCE 137 AA; 15441 MW; 971415552E6FD536 CRC64;
                                                                                                                                                                                            EMBL; BC009815; AAH09815.1;
MGD; MGI:109615; Cdrap.
                                                                                                                                                                                                                                                   Submitted (JUL-2001) to the
                                                                                                                                                                                                                                                                           Strausberg K.;
                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28 HGR---RFSDLKVCGDEECSMLMYRGKALEDFTGPDCRFVNFKKGDDVYVYYKLA--GGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83 LELWAGSV--EHS-----FGYFPKDLIKVLHKYTEEELHIPADETDFVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 KQPDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53 -- PDC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MARILILLOGIVVLCAGHGVFMDKLSSKKLCADEECVCKALLTVWFSLSFYHIMGNLSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MARILILLEGIVALCAGHGMFMDKLSSKKLCADEECV-----YTISLARAQEDYNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 23, (TrEMBLrel. 23, (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7431 MW;
               27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6; Mismatches
                                                                                                                                                                                                                                                      EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 189; DB 11;
Pred. No. 3.6e-13;
                     Score 184.5; DB 11; Length 137; Pred. No. 2.7e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3CBE75527D3CBF7F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          o
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ب</u>
       ω
••
```

```
RESULT 6
Q90XF1
ID Q90X
AC Q90X
AC Q90X
DT 01-I
DT 01-I
DT 01-I
OC Tet
OC Euk
OC Ac
CC Ac
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC
CC AC

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
Q96PC5
                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local (
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Melanoma inhibitory activity protein (Fragment).
Tetraodon nigroviridis (Green puffer).
Tetraodon nigroviridis (Green puffer).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei, Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetradontoidea; Tetraodontidae; Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bosserhoff A.K., Buettner R.;
"Characterization of the MIA gene family.";
"Characterization of the MIA gene family.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF390176; AAL26391.1; -.
EMBL; AF390176; AAL26391.1; -.
InterPro; IPR001452; SH3.
Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q90XF1;
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q90XF1
                                                                                  Bosserhoff A.K., Buettner R.;

Bosserhoff A.K., Buettner R.;

"Characterization of the MIA gene family.";

Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AF390175; AAL26990.1; -.

InterPro; IPR001452; SH3.

SMART; SM00326; SH3; 1.

SMART; SM00326; SH3; 1.

SEQUENCE 119 AA; 13535 MW; AEF529762D880AC5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Melanoma inhibitory activity protein 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q96PCS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=99883;
                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q96PC5
                                                                                                                                                                                                                                                                                               TISSUE=Embryo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 26.1%;
Similarity 42.4%;
Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VLLGIVVLSVFSGPSRADRAMPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYR 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GOQIYYYSKLVTENGAG-AFWAGSV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLGGLVALCAGHG-----MFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GOVVYVESKL---KGRGRLFWGGSV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -IGHFPSSIVEETHPLMAAQTEVKTSNWDFYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGA-FWAGSV-----YGDHQDEMG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         İMIARALQDYYPADCXFIPIRQGQLIYVYAML---KGRĞSQFWAĞSVQDSYYĞQQEAR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88 AA; 10080 MW; C355C1FE04DA22EA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
   24.6%;
34.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 176.5; DB 13; Length Pred. No. 1.2e-11;
      Score 166; DB 4;
Pred. No. 2.4e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26;
                                 Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.
```

```
912UT 8
912UT 9912
ID 2912
ID 2912
ID 2912
ID 01-D
ID 01-D
ID 01-D
ID 01-D
ID 01-M
ID Mela
OS Muss
OC Euka
OC MAMM
OC MAMM
OC MAMM
OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS OC MAMM
IS O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                     RRR RR COCCOGNET DISTRIBUTION OF THE RR COCCOGNET DISTRIBUTION OF THE RR COCCOGNET OF THE RR COCCOGNET OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE RESERVE OF THE R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Characterization of the MIA gene family.";
submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF390177; AAL26992.1; -.
InterPro; IPR001452; SH3.
SMART; SM00326; SH3; 1.
SEQUENCE 119 AA; 13397 MW; 589F390C0B49D1C7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
SEQUENCE rave ..... STRAIN-ddy; TISSUE=Testis; STRAIN-ddy; TISSUE=Testis; MEDLINE=97190224; PubMed=9038379; MEDLINE=97190224; PubMed=9038379; Meneko Y., Nonogushi K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Melanoma inhibitory activity protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     091ZV0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07ZT6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUL-1997 (TrEMBLrel. 04, 01-JUL-1997 (TrEMBLrel. 04, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bosserhoff A.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Embryo;
                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vav-T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  008526;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         008526
                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120 TIDIDEFC 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60 VKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIP 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     114 SDFLC 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FTKGEEISVYVKLAGER---EDLWAGSKGKE-----FGYFPRDAVQIEEVFISEEIQMS 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ILLIGGLVALÇAGHGMFMDKLSSKKL-----CADEECVYTISLARAQEDYNAPDCRFIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILLLAISLTKC-----LESTKLLADLKKCGDLECEALINRVSAMRÖYRGPDCRYLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TKESDFLC 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDFFC 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GEEISVYVKLGGDR--EDLWAGSKGKD-----FGYFPRDAVQIEEVFISEEIQMSTKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTD 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RILLLVVS--LAKCL-EGTKL--LAHLKKCGDLECETLISRVLALRDYTGPDCRYLNFTT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RILILLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Buettner R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23.7%; Score 160; DB 11; 35.2%; Pred. No. 1.1e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18; Mismatches 49; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119
                              Nishiyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46; Indels
                              Ή.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 119;
                                  Yokoi
                                                                                                                                                                                                                                                                                     Murinae; Mus
                                  Ή.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
```

```
SO SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
밁
                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 23; Conserv
                                                                                                    Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00017; SH2; 1.
Pfam; PF00018; SH3; 1.
PRINTS; PR00452; SH3DOWAIN.
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
SWART; SW00252; SH2; 1.
SWART; SW00356; SH3; 1.
                                                                                                                                                                                                  MGD; MGI:1888518; Vav3.
InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
Pfam; PF00017; SH2; 1.
ProDom; PD0000093; SH2; 1.
ProDom; PD000066; SH3; 1.
SMART; SM00252; SH2; 1.
SMART; SM00256; SH3; 2.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50001; SH2; 1.
PROSITE; PS50002; SH3; 2.
Hypothetical protein.
SEQUENCE 287 AA; 32662 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Higuchi T., Itoh K., Yoshida O., Miki T., Fujita J.; "Expression of a novel isoform of Vav, Vav-T, containing a single Srchomology 3 domain in murine testicular germ cells."; Oncogene 14:713-720(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical 32.7 kDa protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SH3 domain.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS50001; SH2; 1. PROSITE; PS50002; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8R076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg R., Strausberg (APR-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q8R076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10
                                                                                                                         Local Similarity 32.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BC027242; AAH27242.1;
                                                41 ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF 100
                                                                                                      22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YVEED--YSE 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN
166 AA; 19434 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13.8%;
                                                                                                                                                                                                             32662 MW; BF2850B8F921F048 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38; Score 93.5; DB 11; Length 166;

18; Pred. No. 0.032;

14; Mismatches 20; Indels 13
                                                                                                      ; Score 93.5; DB 11; Length 287; pred. No. 0.063; 13; Mismatches 21; Indels 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2C3AF1FF07A5018F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  287
                                                                                                                 Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             156
                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
```

```
RESULT 11
OBVDU
AC OBVDU
AC OBVDU
AC OBVDU
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 01-W
DT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
Ś
                                                                                                     Ş
                                                    밁
                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                    PROSITE; PS50021; CH; 1.

PROSITE; PS500479; DAG PE_BIND_DOM_2; 1.

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.

PROSITE; PS50001; DH_I; 1.

PROSITE; PS50001; DH_2; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8VDU4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similar to vav oncogene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8VDU4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: CONTAINS 1 PH
EMBL; BC020487; AAH20487.1; -.
MGD; MGI:98923; Vav.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR002219; DAG PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR00149; PH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg R.;
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF03915; AIP3; 1.
Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG_PE-bind; 1.
Pfam; PF00169; PH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR001849; PH.
InterPro; IPR000219; RhoGEF.
InterPro; IPR000980; SH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00452; SH3DOMAIN.
PRINTS; PR00888; SM22CALPONIN.
ProDom; PD001527; CH_type; 1.
ProDom; PD00093; SH2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom; PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001452;
InterPro; IPR003096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001715; Calponin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam;
                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                    748 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PF00017; SH2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PF00621; RhoGEF; 1.
104 LVREQRVYQE 113
                                                                                                     44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SM00252; SH2; 1.
SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SM00233; PH; 1.
SM00325; RhoGEF; 1.
                                                                                                                                                      ch 13.8%; Score 93.5; DB 11; Length 806; Similarity 32.9%; Pred. No. 0.22; 23; Conservative 14; Mismatches 20; Indels 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PSTYVEE 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSNLVRE 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR005613; AIP3.
                                                                                                                                                                                                                                                                    806 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                 93868 MW; F4368CD13A62D695 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PH DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Å
                                                                                                                                                                 Indels 13;
                                                                                                                                                                 Gaps
```

밁

YVEED--YSE

```
OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCOCO DITO OCCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       გ
PRESENTED BY SERVICE STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
EMBL; ANA(4915; AAL(6249.1; -...
InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH_type.
InterPro; IPR003247; CH_type.
InterPro; IPR003219; DAG_PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001849; PH.
InterPro; IPR000219; RhoGEF.
InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8UUX6 PRELIMINARY;
Q8UUX6;
01-MAR-2002 (TrEMBLrel. 2
01-MAR-2002 (TrEMBLrel. 2
01-MAR-2003 (TrEMBLrel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QBBTV7 PRELIMINARY;
QBBTV7;
01-MAR-2003 (TrEMBLrel. 23,
01-MAR-2003 (TrEMBLrel. 23,
01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the RIKEN Genome Exploration Research "Analysis of the mouse transcriptome b 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
EMBL: AK088586; BAC40436.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=NOD; TISSUE=Thymus;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VAV proto-oncogene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The FANTOM Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GDP/GTP exchange factor VAV3.
                                                                                                                                                                                                                                        Phosphoinositide 3-Kinase Activation.";
J. Exp. Med. 195:189-200(2002).
-i- SIMILARITY: CONTAINS 2 SH3 DOMAINS.
-i- SIMILARITY: CONTAINS 1 PH DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                               "Vav3 Modulates B Cell Receptor Responses by Regulating
                                                                                                                                                                                                                                                                                                                                                                                              Kurosaki T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=11805146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       836 YVEED--YSE 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        787 AKARYDECARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                         Ishiai M., Scharenberg A.M., Freshney N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3586; BAC40436.1; -.
845 AA; 98093 MW; 5D0DE0D9311DFB8B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13.8%; Score 93.5; DB 11; Length 8: 32.9%; Pred. No. 0.24; tive 14; Mismatches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata;
Veognathae; Galliformes; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20, Created)
20, Last sequence update)
23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h Group Phase I & II Team;
based on functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             846 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 11; Length 845;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Downward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               835
```

```
RESULT 14
Q96D37
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PRO0401; SH2DOMAIN.
PRINTS; PR00452; SH3DOMAIN.
PRINTS; PR00888; SM2CCALPONIN.
PRODOM; PD001527; CH type; 1.
PRODOM; PD000093; SH2; 1.
PRODOM; PD000066; SH3; 1.
SMART; SM00109; C1; 1.
SMART; SM00103; CH; 1.
Submitted (AUG-2001) to the EMBL/GenBank/DDBJ dat
-:- SIMILARITY: CONTAINS 2 SH3 DOMAINS.

-:- SIMILARITY: CONTAINS 1 PH DOMAIN.

R EMBL, BC013361; AAH13361.1; --
R InterPro; IPR002219; DAG PE-Dind.
R InterPro; IPR001331; GDS_CDC24.
R InterPro; IPR001331; GDS_CDC24.
R InterPro; IPR001349; PH.
R InterPro; IPR000299; SH2.
R InterPro; IPR000219; RhoGEF.
R InterPro; IPR000299; SH2.
R InterPro; IPR001452; SH3.
R InterPro; IPR001452; SH3.
R Pfam; PF00150; DAG_PE-Dind; 1.
R Pfam; PF001621; RhoGEF; 1.
R Pfam; PF00621; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS50021; CH; 1.

PROSITE; PS00479; DAG PE_BIND_DOM_2; 1.

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.

PROSITE; PS50001; DH_1; 1.

PROSITE; PS50010; DH_2; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00307;
Pfam; PF00130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SH3 domain
                                                                                                                                                                                                                                                                                             Q96D37;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR 2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                     Hypothetical protein.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                Q96D37
                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                               Strausberg R.;
                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                            rissue=Placenta;
                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              838 PSTYVEE 844
                                                                                                                                                                                                                                                                                                                                                                                                                                      101 PSNLVRE 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SM00252; SH2; 1.
SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SM00233; PH; 1.
SM00325; RhoGEF; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 846 AA; 97815 MW; C47EE949D873821B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DAG_PE-bind; 1.
PH; 1.
RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SH2; 1.
SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13.8%; Score 93.5; DB 13; Length 34.3%; Pred. No. 0.24;
                                                                                                                                                                                                                                                                                                                                                     719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
```

```
RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R SMART; SM00252; SH2; 1.

R SMART; SM00326; SH3; 2.

R PROSITE; PS00479; DAG_PE_BIND_DOM_1; 1.

R PROSITE; PS500081; DAG_PE_BIND_DOM_2; 1.

R PROSITE; PS50010; DH_2; 1.

R PROSITE; PS50010; DH_2; 1.

R PROSITE; PS50001; PH_DOMAIN; 1.

R PROSITE; PS50001; SH2; 1.

R PROSITE; PS50001; SH2; 1.

R PROSITE; PS50002; SH3; 2.

Q SEQUENCE 719 AA; 83727 MW; A51B757DA543BA6C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 13.5%; Score 91.5; DB 4; Length 719; Best Local Similarity 32.9%; Pred. No. 0.32; Matches 23; Conservative 14; Mismatches 20; Indels 1
                                                                                                                                                                       way Modulates B Cell Receptor Responses by Regulating Phosphoinositide 3-Kinase Activation.";

J. Exp. Med. 195:189-200(2002).

-!- SIMILARITY: CONTAINS 2 SH3 DOMAINS.
-!- SIMILARITY: CONTAINS 1 PH DOMAIN.

EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; AAL16250.1; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; AV046916; --
EMBL; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00018; SH3; 2.
PRINTS; PR00401; SH2DOWAIN.
PRINTS; PR00452; SH3DOWAIN.
PRODOM; PD000093; SH2; 1.
PRODOM; PD000066; SH3; 1.
SMART; SM00109; C1; 1.
SMART; SM00123; PH; 1.
SMART; SM00325; RhGGEF; 1.
                   Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG PE-bind; 1.
Pfam; PF00169; PH; 1.
Pfam; PF00621; RhoGEF; 1.
Pfam; PF00017; SH2; 1.
Pfam; PF00018; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2002 (TrEMBIrel. 20, Created)
01-MAR-2002 (TrEMBIrel. 20, Last sequence update)
01-MAR-2003 (TrEMBIrel. 23, Last annotation update)
GDP/GTP exchange factor VAV2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08UUX5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8UUX5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=11805146
Inabe K., Ishiai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661 AKARYDFCARDRSELSLKEGDII----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
PR00401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YVEED--YSE 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ishiai M., Scharenberg A.M., Freshney N., Downward J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
SH2DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KILNKKGQQGWWRGEIYGR-----VGWFPAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           839 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709
```

```
ঠ
                                                                                                              B
                                                                                                                                     Ś
          Search completed: December 29, 2003, 16:06:27
                                                       밁
Job time :
                                                                                                                                                                    Query Match
Best Local S
Matches 23
                                                                                                                                                                                                                                                       PROSITE; PS50021; CH; 1.

PROSITE; PS00479; DAG PE_BIND_DOM_1; 1

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1

PROSITE; PS50010; DH_2; 1.

PROSITE; PS50003; PH_DOMAIN; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00325; RhOGEF; 1.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
SMART; SM00233; PH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00452; SH3DOMAIN.
ProDom; PD001527; CH_type; 1.
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 2.
                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                           SH3 domain.
                                                                                                               773 VFTPRVIGTAVARYNFAARDMRELSLREGDVVKIYSRIGGDQG---WWKG-----ETN 822
                                                                                  95 GIVGYFPSNLVREQRV 110
                                                                                                                                          38 VYT---ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEM 94
                                                                                                                                                                       23; Conservative
                                                                                                                                                                                      Similarity
                                                       GRVGWFPSTYVEEEGV
                                                                                                                                                                                                                            839 AA; 97500 MW; 6C1322ABAC23A530 CRC64;
                                                                                                                                                                    12.8%; Score 86.5; DB 13; 30.3%; Pred. No. 1.4; tive 18; Mismatches 22;
                                                          838
                                                                                                                                                                                                     DB 13; Length
                                                                                                                                                                          Indels
                                                                                                                                                                            13;
```

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq length: 0
seq length: 2000000000
A Geneseq 19Jun03:*

1: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
7: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
9: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
9: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
10: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
11: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
12: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
13: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
14: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
15: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
16: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
17: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
18: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
20: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
21: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
22: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
23: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*
24: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
23: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
24: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December 29, 2003, 16:03:18 ; Search time 25.098 Seconds (without alignments) 809.506 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-47
676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1107863 segs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILILLLGGLVALCAGHG......
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1107863
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length DB	Length	BB	ID	Description
1	676	100.0	128	22	AAB69130	Rat MLP protein se
N	655	96.9	128	22	AAB69125	Mouse MLP protein
w	600	88.8	128	22	AAB82671	Human growth regul
4.	600	88.8	128	22	AAB69123	Human MLP process
υ	600	88.8	128	23	ABB95602	Human anglogenesis
თ	600	88.8	128	23	ABB84996	Human PRO98/3 proc
7	600	8.88	128	23	AAU83627	Human PRO procein,
œ	600	88.8	128	23	AAU09871	Novel human secret
9	591	87.4	110	22	AAB69131	Rat MLP protein se

4	ω	0	1 20	0 20.	9 20	8 201	7	on :									.,		N)		.	N	N) I			~ N 1	2	273	275	275	4.		ر س	٠,	
99 29.4	v	30	.5 30	.5 30	.5 30	.5 30	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	15 31	5 31	5 31	15 31.	7 36	л 40	5 40.	5 40.	68.	.5 76.	1 80.	4 84.	
499		, ~		_	٠.	w	-	-	~	~	_	_	_	_	_	-	-	-																	
2 C 4 4) L	23	21	23	22	23	21	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	22	22	23	16	22	22	16	22	22	22	22	
ABU71407 ABU65864		3 -	8821	702	21	AAM25834	21:	2	079	72	2	398	655	768	313	98	219	203	351	139	499	560	9593	760	U2930	211	981	AAG65615	561	981	912	82	912	6912	
reted/tr	a genocoga	plybe	TANGO 13	TANCO 130	TANGO 130	procein se	TANGO 13	e TANGO 130	secreted/tr	Typep	ecreted/t	Human PRO polypept	dadArod		secre	secreted/tr	PRO polypep	human secre	n secreted po	n PRO19670 pr	PRO19670	angrogene	Human secreted/tra		Human PRO polypept	3	Tat	חווומנו	000		C WILL DIOCETT R	n growen regu	מושר ביירבות	מ אנים ביינים	O MID DIOTAL

ALIGNMENTS

```
RESULT 1
AAB69130
IID AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB69130 standard; Protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rat MLP protein sequence SEQ ID NO:47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB69130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200102564-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus sp.
    WPI; 2001-159271/16.
N-PSDB; AAF59098.
                                                                                                                                         Itoh Y, Nishi K, Ogi K, Ohkubo S, Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                             30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inhibitor
                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                             99JP-0186718.
                                                                                                                                                                                                  Mogis,
                                                                                                                                                                                             Noguchi Y,
                                                                                                                                                                                                       Yoshimura
```

<u>;;</u>

Page

N

```
safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and diseases
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AAB69125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing the diagnosis and development of promoters and inhibitors angiogenesis. or treating bone and joint diseases as well as pathologic angiogenesis or treating bone and joint diseases as well as pathologic angiogenesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 6; Page 106; 111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                         AAB69125 standard; Protein; 128 AA.
                                                                                                                                                                                                                                                                                             MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; cardiant;
                                                                                                                                                                                                                                                                                                                                                Mouse MLP protein sequence SEQ ID NO:12.
                                                                                                                                                                                                                                                                                                                                                                           23-APR-2001
                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                              11-JAN-2001.
                                                                                                                                                                                                                                                                                       inhibitor
                                                                                                                                                             30-JUN-1999;
                                                                                                                                                                                    29-JUN-2000; 2000WO-JP04278
                                                              N-PSDB;
                                                                                               Tanaka H;
                                                                                                             Itoh Y,
                                                                                                                                   (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MARÍLILLIGGLVALCÁGHGMEMDKLSSKKLCADEECVYTÍSLARÁQEDYNÁPDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          kkĠoQiyvyskĹvTendádarwadsvydbhQbendivgyrpsnLvreokvydeatkeipT
                                                               AAF59068.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDIDFFCE 128
                                                                                                             Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                               Ogi ĸ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                   Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 676; DB 22;
pred. No. 1.2e-74;
                                                                                                                    Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                    Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                         Yoshimura
                         joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                          ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
RESULT 3
AAB82671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the communication of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 4; Page 93-94; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB82671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neuroectodermal tumour; glioma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human growth regulatory-like polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein
Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous systematics.
                                                                                                                                                                                                                                                                                                                                   25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                     25-JAN-2000; 2000US-0491404.
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                   02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                               WO200155332-A2.
                                                                                         N-PSDB; AAH26343.
                                                                                                                                                                                     Mize NK,
                                                                                                                                                                                                                            (HYSE-) HYSEQ INC
                                                                                                                                                           Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MARILITLIGGUVALCAGHGMFMDKLSSKKLCADEBCVYTISLARAGEDYNAPDCRFINV 60
                                                                                                                    2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          xxgqqıyvysxlviengagafmagsvygdhqdemgivgyfgnlyreqrvyqeatkeift 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MARTLILLIGGLÍVVLCAGHGVENDKLSSKKLCADBECVÝTÍSLARAQBDÝNA PDČRFÍDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              kkgodi vyski vtengage panas vygohode mgi vgv psni vkeok vydeatke i pt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; Protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDIDFFCE 128
                                                                                                                                                                RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative .
                                                                                                                                                                                  Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "separately claimed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= Mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96.9%;
                                                                                                                                                                                       Ford
                                                                                                                                                                                         JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 655; DB 22
Pred. No. 4.7e-72
                                                                                                                                                                                         Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer; therapy; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                              Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                     Liu
                         nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

disorders

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is that of a novel human growth regulatory-like polypeptide (GRLP). The amino acid sequence is predicted from a novel assembled cDNA (see AAH26343) based on Hyseq clone number novel assembled reprotein has a moliwt of 14 kDa unglycosylated. GRLP belongs to the same protein family as growth regulatory protein growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive protein (CD-RAP, 44% identity acid sensitive prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as gliomas. The polypeptides, which include the GRLP mature protein, may also have nutritional uses, cytokine and cell proliferation or differentiation activity, stem cell growth factor activity,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 10; Page 116-117; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    haematopoiesis regulating activity, tissue growth activity, immunosuppressive or immunostimulant activity, activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, use in cancer diagnosis and therapy, drug screening, receptor/ligand activity, antiinflammatory activity, and treatment of leukaemia, nervous system disorders,
                                                                                                                                                                                                                                                                                                                     MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 arthritis and inflammation.
                                                       29-JUN-2000; 2000WO-JP04278
                                                                                                                     11-JAN-2001
                                                                                                                                                                                WO200102564-A1
                                                                                                                                                                                                                                        Homo gapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human MLP protein sequence SEQ ID NO:6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB69123 standard; Protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKBIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MARILILLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
   99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 600; DB 22;
Pred. No. 2.6e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
RESULT 5
ABB95602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
       Matches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
20-JUL-2000; 2000US-219556P.
25-JUL-2000; 2000US-220644P.
25-JUL-2000; 2000US-220664P.
28-JUL-2000; 2000WG-US20710.
02-AUG-2000; 2000US-222695P.
17-AUG-2000; 2000US-0643657.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAP53063 to AAP53099 and AAB59122 to AAB59132 represent sequences used the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the companies of the comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 2; Page 91-92; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAF59065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorde cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human angiogenesis related protein PRO9873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABB95602;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABB95602 standard; Protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JUL-2002
                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                               09-JUL-2001; 2001WO-US21735.
                                                                                                                                                                                                                                31-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                antiarteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 KKGQQIYYYSKLVKENGAGEFWAGSYYGDGQDEMGYVGYFPRNLVKEQRVYQBATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MARILILLGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 600; DB 22;
Pred. No. 2.6e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
```

23-AUG-2000; 24-AUG-2000; 07-SEP-2000; 15-SEP-2000;

0

```
18-SEP-2000;
24-OCT-2000;
28-NCV-2000;
08-NCV-2000;
10-NCV-2000;
11-DEC-2000;
20-DEC-2000;
20-DEC-2000;
20-DEC-2000;
20-DEC-2000;
20-DEC-2001;
11-MAR-2001;
11-MAR-2001;
11-MAR-2001;
11-MAY-2001;
11-MAY-2001;
12-MAY-2001;
15-MAY-2001;
25-MAY-2001;
25-MAY-2001;
25-MAY-2001;
25-MAY-2001;
25-MAY-2001;
25-MAY-2001;
                                                                                                                                                                                                                                Baker KP,
Godowski l
                                                                                                                                                                                                                                                                                                                     (GODD/)
(GODO/)
(GURN/)
(HILL/)
(MARS/)
(PANJ/)
                   The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restensis, rheumatoid arthritis, argina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a PRO protein of the invention.
                                                                                                                                        One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                    Godowski PJ,
Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-MAY-2001;
                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                      (STEP/)
                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                           (PAON/)
                                                                                                                                                                                                                                                                                                                                                                                                             FERR/)
                                                                                                                                                                                                 2002-171999/22.
                                                                                                                     11; Fig 360; 567pp; English.
                                                                                                                                                                                                                                                                                                                               FERRARA N.
GERBER H.
GERRITSEN M E.
GODDARD A.
GODOWSKI P J.
GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                                                                                          PAN J.
PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
                                                                                                                                                                                                                                                                                                                                                                                                                       GENENTECH INC.
BAKER K P.
                                                                                                                                                                                        ABL95740.
                                                                                                                                                                                                                                                                  ₩00D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000WO-US23522.
2000WO-US23328.
2000US-230978P.
2000US-0000000P.
2000US-0664610.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001US-080869.
2001US-0816744.
2001US-0828366.
2001US-0854208.
2001US-0854280.
2001US-0856034.
2001US-0856034.
2001US-0856034.
                                                                                                                                                                                                                                            Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0747259.
2000WO-US34956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001US-0767609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US30952.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US06666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001US-0796498
                                                                                                                                                                                                                                                                  ε
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001WO-US17800
2001WO-US19692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001WO-US06520
                                                                                                                                                                                                                        Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001WO-US00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001US-0870574.
2001WO-US17443.
                                                                                                                                                                                                                    Gurney AL, H
                                                                                                                                                                                                                                                                  Η.
                                                                                                                                                                                                                        Gerber H, Gerritsen ME, Goddard A;
L, Hillan KJ, Marsters SA, Pan J,
CK, Williams PM, Wood WI, Ye W;
                                                                                                                                                                                                                                                Þ
                                                                                                                                                                                                                                       Paoni NF;
```

Sequence

```
RESULT 6
ABB89
ABB49
AC ABB8
AC ABB89
XXX ABB8
AC ABB89
XXX ABB8
XXX ABB8
XXX Huma
XXX Huma
XXX Huma
XXX Huma
XXX Huma
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XXX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 111; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophibitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
18-SEP-2000

18-SEP-2000

24-CCT-2000

08-NOV-2000

08-NOV-2000

10-NOV-2000

10-NOV-2000

20-DEC-2000

20-DEC-2000

20-DEC-2000

22-UAN-2001

28-FEB-2001

28-FEB-2001

10-MAR-2001

11-MAR-2001

12-MAR-2001

11-MAR-2001

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-JUL-2000;
02-AUG-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human PRO9873 protein sequence SEQ ID NO:360.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABB84996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABB84996 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200200690-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        healing; chromosome mapping; gene mapping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĸĸĠQQIYVVSĸĹVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNĹVKEQRVYQEATKEVPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MARILLIFLPGLVAVCAVHGIFMDRLASKKLCADDECVÝTÍSLASAQEDÝNA PDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MARILILLOGIVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
  2000WO-US23522
2000WS-23978P
2000US-0664610
2000US-0663350
2000US-0653350
2000US-079238
2000WS-079238
2000WO-US30873
2000WO-US30873
2000WO-US30873
2000WO-US314956
2001US-0767609
2001US-0767609
2001US-0767609
2001US-0767609
2001US-0806520
2001US-0806520
2001US-0806666
2001US-0806666
2001US-0806689
2001US-0806689
2001US-0806689
2001US-0806689
2001US-0806689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001WO-US19692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-222695P.
2000US-0643657.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-213637P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-220664P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-220624P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-219556P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 600; DB 23; pred. No. 2.6e-65; 9; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

```
ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to CC ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, CC antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic CC activities, and can be used in gene therapy. The PRO polynucleotides, CC proteins, agonists and antagonists are useful for treating or diagnosing CC proteins, agonists and antagonists are useful for treating or diagnosing CC a cardiovascular, endothelial or angiogenic disorder in a mammal, CC e.g. cardiac hypertrophy, trauma, cancer, age-related macular CC degeneration, atherosclerosis, hypertension, arterial restenosis, thrombophlebitis, CC rheumacoid arthritis, angina, myocardial infarctions, thrombophlebitis, CC lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polynucleotides have applications consonne and gene mapping. ABL88259 to ABL88267 represent primers and CC probes used in the exemplification of the present invention.
RESULT 7
AAU8362
ID AAU86
XX AAU86
XX AAU86
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAY-2001;
25-MAY-2001;
25-MAY-2001;
30-MAY-2001;
30-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baker KP, Ferrara N, Ger
Godowski PJ, Gurney AL,
Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-090516/12.
N-PSDB; ABL88251.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 11; Fig 360; 565pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                 Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation;
                                                                                                                                                                                                                                                 AAU83627 standard; Protein; 128 AA.
                                                                                                                                       Human PRO protein, Seq ID No
                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        111;
                                                                                                                                                                                                                                                                                                                                                                                                           19
                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   μ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MARILITLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                      necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                         TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                           KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIFT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAR ILLLFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; 2001US-0866028.
; 2001US-0866034.
; 2001WS-087092.
; 2001US-0870574.
; 2001WO-US17443.
; 2001WO-US17800.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerber H, Gerritsen ME, Goddard
L, Hillan KJ, Marsters SA, Pan
CK, Williams PM, Wood WI, Ye W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 600; DB 23;
Pred. No. 2.6e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Paoni NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Homo sapiens

Ś 밁 S

KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQBATKEIPT 120 MARILLEFLPGLVÁVCÁVHGI FMDRLASKKL CÁDDECVÝTI SLÁSÁ QEDÝNÁ PDCRFÍNV MARILILLLGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60

ĸĸĠĠĠĬŶĬŶĸĸĹĬĸĸĸĠĠĠĸĸĸĠŚŶŶĠĠĠŎĸĸĠŶŶĠŶŔĸĸĹŶĸĸĠĸŶŶĠĸĸĸĸĸĸĸ

61 61 Matches Query Match

Local

Similarity

88.8%;

Length 128; Indels

0;

Gaps

60

Conservative

9; Mismatches Score 600; DB 23; Pred. No. 2.6e-65;

--

Sequence

128 AA;

```
The invention relates to one hundred and twenty two nucleic acids CC encoding PRO polypeptides. The sequences of the 122 PRO polynucleotides CC encode human secreted proteins. The PRO nucleic acids, polypeptides, CC agonists and antagonists are useful for treating a PRO related disorder. CC cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or CC cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or CC liver tumour. The PRO polypeptides are useful for stimulating the CC liver tumour. The PRO polypeptides are useful for stimulating the proliferation or differentiation of chondrocyte cells, for stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal for stimulating or inhibiting the proliferation of normal human dermal for stimulating the PRO polypeptide may also be used as molecular CC eaphications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. AAU83592-AAU83713 represent human PRO protein sequences of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2001; 2001WO-US21066.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-AUG-2000;
15-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUL-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-NOV-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                     One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Grimaldi JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; ABK33571.
                                                                                                                                                                                                                                                                                         Claim 11; Figure 72; 359pp; English.
                                                                                                                                                                                                                                                                                                                          tumour or liver tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                      2002-172001/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers L,
C, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-220664P.
2000US-220666P.
2000US-220893P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US30873.
2000US-253646P.
2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-219556P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-000000P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US23522.
2000WO-US23328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US06520.
2001US-0854280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000WO-US20710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-220638P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-220605P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001WO-US17092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US34956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0747259
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerritsen ME, Goddard
Smith V, Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard A, Guuc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski PJ;
```

```
Matches 111;
Conservative
                  9
                   Mismatches
                    Indels
                    0
                    Gaps
```

밁

61

GAFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE

0

S

Query Match Best Local Similarity

86.7%;

Score 600; DB 23; Pred. No. 2.6e-65;

Length 128;

Sequence

128 AA;

```
RESULT 8
AAU09871
The invention relates to an isolated novel secreted polypeptide (I) and (II) are useful for treating cancer. CC polymuclectide (II). (I) and (III) are useful for treating cancer. CC autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility; neurological and CC disorders, inflammatory disorders, infertility; neurological and CC psychiatric diseases, cardiovascular diseases, respiratory diseases, CC renal diseases, or gastrointestinal diseases. These may also be used to CC treat diseases, abnormalities and disorders caused by abnormal CC expression, production, function and/or metabolism of the genes, as conceined to inducing immunological response in a mammal, and in CC expression, production in the effect of added compounds on the conceining methods for detecting the effect of added compounds on the conceining methods for detecting the effect of added compounds on the conceining methods and polypeptide in cells. The polypeptides can be used production of mRNA and polypeptide in cells. The polypeptides, can be used to identify membrane-bound or soluble receptors. The polypucleotides can be used to identify membrane-bound or soluble receptors. The polypucleotides, can be used as diagnostic reagents, in chromosome localisation studies, amino acid sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease; neurological disease; psychiatric disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU09871 standard; Protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU09871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200179454-Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          respiratory disease; renal; gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                              New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-APR-2000; 2000US-196603P.
24-APR-2000; 2000US-199417P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                  disorders, inflammatory disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAS17583.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Agarwal P,
                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 73-74; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002-061975/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMITHKLINE BEECHAM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Murdoch PR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rizvi SK,
                                                                                                                                                                                                                                                                                                                                                                                                                                            infertility, cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith RF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xiang Z;
```

```
RESULT 9
AAB691
ID AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX MLP;
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inhi
XX Inh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
  S
                                                                 밁
                                                                                                                    S
                                                                                                                                                                                   Matches 110;
                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; cardiant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB69131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB69131 standard; Protein; 110 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rat MLP protein sequence SEQ ID NO:49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                The present invention describes novel MIP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59099 and AAB59122 to AAB69132 represent sequences used AAF59063 to AAF59099 and AAB59122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 5; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAF59099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Itoh Y,
                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                        in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 KKGQQIYVYSKLYTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIFT 120
                                                                                                                          19 HGMEMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 78
              79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MARILLLFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFFRNLVKEQRVYQEATKEVPT 120
                                                                    \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nishi K, Ogi K, Chkubo S,
GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 128
                                                                 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                        110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99JP-0186718.
                                                                                                                                                                                                                    87.4%;
                                                                                                                                                                                   0
                                                                                                                                                                                                                       Score 591; DB 22; pred. No. 2.7e-64;
                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mogi S,
                                                                                                                                                                                                                                                     DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Noguchi Y,
                                                                                                                                                                                                                                                           Length 110;
                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yoshimura K;
                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      joint
                                                                                            60
```

```
RESULT 10
AAB69127
                                                                                                                                                                                                                                                                              RESULT 11
AAB69126
                                                                                                                                                                       밁
                                                                                                                                                                                                S
                                                                                                                     뮍
                                                                                                                                           S
                                                                                                                                                                                                                                        Query Match
Best Local S
                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB69127 standard; Protein; 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse MLP protein sequence SEQ ID NO:26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB69127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitor
                                                                                                                                                                                                                                                                                                                  The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAP59063 to AAP59099 and AAB59122 to AAB69132 represent sequences used AAP59063.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 3; Page 98-99; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAF59080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TAKE ) TAKEDA CHEM IND LTD.
23-APR-2001
                                                    AAB69126 standard;
                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                         the exemplification of the present invention.
                                                                                                                                                                                                                              106;
                                                                                                                                                                                                    19
                                                                                                                      43
                                                                                                                                               79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nishi K,
                                                                                                                                                                                             HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 78
                                                                                                                                            GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                         HĠVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                     GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIFTTDIDFFCE 110
                                                                                                                                                                                                                                                                                  110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                              Conservative
  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ogi K, Ohkubo S,
                                                                                                                                                                                                                                             96.4%;
                                                                                                                                                                                                                                 ω
••
                                                                                                                                                                                                                                               Score 574; DB 22;
Pred. No. 3.3e-62;
                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Noguchi Y,
                                                                                                                                                                                                                                                              Length 110;
                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yoshimura
                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   joint
                                                                                                                                                                                     60
                                                                                                                                                                                                                                          0
```

```
RESULT 12
AAB82672
                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                               Ś
Matches
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human MLP protein sequence SEQ ID NO:24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. ARF59093 and ARF69122 to ARB69132 represent sequences used ARF59063 to ARF59099 and ARB69122 to ARB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200102564-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAF59079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 97-98; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diseases
                                                                                                Human growth regulatory-like polypeptide (mature protein).
                                                                                                                                                                                      AAB82672 standard; Protein; 105 AA.
                                                      Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; tharapy; diagnosis.
                                                                                                                                                           AAB82672;
                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-159271/16.
                                                                                                                                                                                                                                                            61 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVFTTDIDFFCE 110
                                                                                                                                                                                                                                                                                       79 GAFWAGSVYGDHQDEWGIVGYFPSNLVREQRVYQEATKEIFTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                 19 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                      1 HGIFMDRLASKKLCADDECVYTISLASAGEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                         110 AA;
                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ogi K, Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                               80.0%;
                                                                                                                                                                                                                                                                                                                                                                                   7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 Score 541; DB 22; Pred. No. 3.6e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                 Length 110;
                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                 78
```

```
cc growth factors, human melanoma derived growth regulatory protein cc growth factors, human melanoma derived growth regulatory protein cc growth factors (64 % similarity and 45% identity over 11 amino acids) cc precursor (64 % similarity and 45% identity over 11 amino acids) cc retinoic acid sensitive protein (CD-RAP, 44% identity and 64% cc similarity over 126 amino acids) and other retinoic acid-sensitive cc growths. GRIP polypeptides and polynucleotides of the invention cc and diagnosis of disorders and diseases caused by, or involving, cc and diagnosis of disorders and diseases caused by, or involving, cc and diagnosis of disorders and diseases caused by, or involving, cc growth and tumours, including neuroectodermal tumours such as cc growth and tumours, including neuroectodermal tumours such as cc gliomas. The polypeptides, which include the GRLP mature protein, cc may also have nutritional uses, cytokine and cell proliferation and also have nutritional uses, cytokine and cell proliferation and also have nutritional uses, cytokine and cell proliferation in adiabonic regulating activity, tissue growth factor activity, acemactaric arminosuppressive or immunostimulant activity, activin/inhibin immunosuppressive or immunostimulant activity.
APB69129
ID AAB
XX
AC AAB
XX
AC AAB
XX
DT 23-
XX
Rac
                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                              D,
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JAN-2001; 2001WO-US02455.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is that of a novel human growth regulatory-like polypeptide (GRLP) mature protein. The sequence is predicted from a novel assembled cDNA (see AAH26343) based on Hyseq clone number 16372272. The protein has a mol.wt. of 14 kDa unglycosylated. GRLP belongs to the same protein family as growth regulatory proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAH26343.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 10; Page 117; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 thrombolytic activity, use in cancer diagnosis and therapy, drug screening, receptor/ligand activity, antiinflammatory activity, and treatment of leukaemia, nervous system disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 activity, and treatment or arthritis and inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                AAB69129 standard; Protein; 87 AA
Rat MLP protein sequence SEQ ID NO:39.
                                         23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RT;
                                                                                                                                                                                                                                                                                                                            24
                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                      94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                 DKLSSKKLCADEBCVYTISLARAQEDYNAPDCRFINVKKQQQIYVYSKLVTENGAGAFWA 83
                                                                                                                                                                                                                                                                                           DRLASKKLCADDECVYTISLASAQEDYNAPDCREINVKKGOQIYVYSKLVKENGAGEFWA 60
                                                                                                                                                                                                              GSVÝGDGQDEMGVVĠÝFPRNÍVKEQRVÝQEATKEVFTTDÍÐFFCE 105
                                                                                                                                                                                                                                   GSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chemotactic/chemokinetic activity, haemostatic and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0491404
                                                                                                                                                                                                                                                                                                                                                                                                                                                 105 AA;
                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                          76.2%;
89.5%;
                                                                                                                                                                                                                                                                                                                                                                          ٠.
ص
                                                                                                                                                                                                                                                                                                                                                                                            Score 515; DB 22;
Pred. No. 5.3e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 105;
                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Liu C;
                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
Ś
                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                  밁
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999; 99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and diagnoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNAS. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 9; Page 103; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes novel MLP proteins and their encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in the exemplification of the present invention.
                                                                                                                                                                                                                           AAR69811 standard; Protein; 131 AA
                                                                Melanoma; inhibition; cancer; melanoma; glioblastoma; neuroblastoma; small cell lung cancer; neuroectodermal tumours; immunosuppressant; phytchaemagglutinin; lymphocyte; interleukin 2; IL-2; detection;
                                                                                                                        Melanoma inhibiting protein (human).
                                                                                                                                                                     25-MAR-2003
                            Homo sapiens
                                                     probe; fusion protein
                                                                                                                                                                                                                                                                                                                    84 GSVYGDHQDEMGIVGYFPSNLVREQRV 110
                                                                                                                                                                                                                                                                                                                                                                            24 DKLSSKKLCADEBCVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWA 83
                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                    87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nishi K, Ogi K, Ohkubo S, Mogi S, Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                          GSVYGDHQDEMGIVGYFPSNLVREQRV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                       (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                 68.3%; Score 462; DB 22; 100.0%; Pred. No. 1.3e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 87;
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            joint
```

```
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                    RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peripheral blood lymphocytes). Antibodies raised against the protein can be used to detect cell producing the protein and also for protein purification. Probes derived from DNA encoding the protein (AAQB4050, AAQB4051) can be used to detect sequences encoding the protein or related proteins. The protein may be expressed as a fusion protein (conjugated with dihydrofolate reductase (DHFR)). (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This protein has melanoma-inhibiting activity and can be used to treat cancer (melanoma, glioblastoma, neuroblastoma, small cell lung cancer, neuroectodermal tumours) or as an immunosuppressant (it inhibits IL-2 or phytohaemagglutinin induced proliferation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New melanoma inhibiting protein and related nucleic acid vectors, transformed cells, antibodies etc., useful for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bogdahn U,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-JUL-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-FEB-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 54; 85pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumours and as immunosuppressant e.g. by gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAQ84050, AAQ84051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1995-075191/10.
                                                                                                                                         MIA; melanoma inhibiting activity protein; antiinflammatory; human; antiarthritic; antirheumatic; antithyroid; osteopathic; nephrotropic; immunosuppressive; ophthalmological; dermatological; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                                          Human MIA protein sequence.
                                                                                                                                                                                                                                           07-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                          AAG65614
                                                                                                                                                                                                                                                                                                        AAG65614 standard; Protein; 131 AA.
15-MAR-2001; 2001WO-EP02991
                                 27-SEP-2001.
                                                                WO200170253-A1
                                                                                                                            neuroprotective; immune tolerance; T-cell tolerance.
                                                                                                                                                                                                                                                                                                                                                                                      117 GKVDVKŤDKWĎFYĆQ 131
                                                                                                                                                                                                                                                                                                                                                                                                                    114 ATKEIPTTDIDEFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     60 RELTIHRGOVVÝVESKÍ---KGRGRLEWGGSVQGDYYGDLAARLGYEPSSIVREDQTIKP 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56 RFINVKKGQQIYVYSKLVTENGAG-AFWAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MARILILLEGLVALCA--GHGMF---MDKLSSKKLCADEECVYTISLARAQEDYNAPDC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MARSIV-CLGVIILLSAFSGPGVRGGPMPKLADRKLCADQECSHPISMAVALQDYMAPDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Buettner R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-EP02369.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40.8%; Score 275.5; DB 16; 44.4%; Pred. No. 1.7e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kaluza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
```

Search completed: Job time : 26.098

December 29, 2003, 16:09:04 secs

59

```
CC tolerance in patients suffering from or susceptible to inflammatory consecution of MIA is useful as a therapeutic substance and is useful for manufacture of pharmaceutical preparations against confinant ory diseases such as an immune-cell mediated cartilage confinant ory diseases such as an immune-cell mediated cartilage confinence in the Graves disease, juvenile arthritis, autoimmune coll mediated cartilage confinence in the Graves disease, juvenile arthritis, primary glomerulonephritis, polyarthritis, osteoarthritis, primary sclerosis, compastencia gravis, Addison's disease, primary biliary sclerosis, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematosis, inflammatory bowel disease, conveitis, systemic lupus erythematory bowel disease, conveitis, systemic lupus erythematory bowel disease, conveitis, systemic erythematory bowel disease, conveitis, systemic erythematory b
                                                      8
                                                                                                                                  밁
                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                               ş
맑
                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antigen, for manufacturing a preparation against inflammatory diseases and for induction of systemic immune tolerance or specific T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein and/or its fragments that have anti-inflammatory effects and induce systemic immune tolerance or specific T-cell tolerance to MIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Use of melanoma inhibiting activity protein or its derivatives as immune modulatory agents for the treatment of inflammatory diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAH47783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nelissen RLH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-MAR-2000; 2000EP-0201063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to the use of melanoma inhibiting activity (MTA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 4; Page 34; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 specifically rheumatoid arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human MIA protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-611446/70.
                                                                 114 ATKEIPTTDIDFFCE 128
                                                                                                                              60 RELTIHRGQVVYVFSKL---KGRGRLFWGGSVQGDYYGDLAARLGYFPSSIVREDQTLKP 116
                                                                                                                                                                                         56 RFINVKKGQQIYVYSKLVTENGAG-AFWAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                               1 MARILILLIGGLVALCA--GHGMF---MDKLSSKKLCADEECVYTISLARAQEDYNAPDC
                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
GKVDVKTDKWDFYCQ 131
                                                                                                                                                                                                                                                                        MARSIV-CLGVIILLSAFSGPGVRGGPMPKLADRKLCADQECSHPISMAVALQDYMAPDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131 AA;
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Verheijden GFM;
                                                                                                                                                                                                                                                                                                                                                                                                          40.8%; Score 275.5; DB 22; Length 44.4%; Pred. No. 1.7e-25; tive 27; Mismatches 37; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 131;
                                                                                                                                                                                                                                                                                                                                                                                                                 11;
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   December 29, 2003, 16:09:08; Search time 17.5686 Seconds (without alignments) 1449.984 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-47
676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  724715 segs, 199017464 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MARILILLLGGLVALCAGHG......RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                  10:
11:
12:
13:
(cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO9_PUBCOMB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_PUBCOMB.pep:*
(cgn2_6/ptodata/2/pubpaa/USO0_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published Applications_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             724715
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

15	14	13	12	11	10	9	00	7	6	տ	4	w	~) (-	Result No.
600	600	600	600	600	600	600	600	600	600	600	600	600	600		600	Score
88.8	88.8	8.88	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.	0.0)	88.8	Query
128	128	128	128	128	128	128	128	128	128	128	128	128	100	2	128	Length
12	12	12	12	12	12	12	12	12	12	12	, L	, ,	, t	J	12	DB B
US-10-219-531-72	US-10-219-530-72	-10-219	-10-219-525	US-10-219-483-72	US-10-219-480-72	-10-219-475		-10-219-069	US-10-219-068-72	OS-10-219-06/-/2	900-617-01-	700-617-01-	010 010	110-10-018-765-70	US-10-216-163-72	ID
Sequence 72, Appr		1 .	, ,	, ,	7 .	, ,	, ,	, ,	7 .	7 .	3 ;	3 i	73		Sequence 72, Appl	Description

45	44	43	42	41	40	9	38	37	36 6	ა 5	ယ 4	J L	32	32	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	
600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	
œ	8	œ	8	œ	В	æ	œ	8	œ	8	œ	œ	œ	8.88	₩.	œ	w	œ	ū	·		۳.	۳.	۳.	٣.	۳.		~	-	
128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	
μ 5	5	5	15	5	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	12	12	12	12	12	12	
19-478-	-10-219-468-7	18-956-7	-10-216-165-	-10-232-233-7	-10-232-231-7	-10-230-260-7	-10-219-481-7	-10-219-479-7	-10-219-466-7	-10-219-464-7	-219-075-7	-10-219-003-7	-10-230-434-7	-219-076-	-10-227-883-7	-10-227-873-7	-10-218-84	-10-216-159A	-10-230-414-	-10-218-631-	-10-230-338-	-10-230-163-	-10-227-884-	-10-223-082-3	-10-232-228-7	-10-230-437-7	-10-223-UBI-3	-10-219-533-72)-219-532	
•	equence 72	equence //,	2 6	, 1 -	7.7	equence /2,	equerice 72,	7 6	equence 12,	ה ה	equence '2'	, ,	equence /2,	, ,	, c) () () (3 6	7,7	equence /2,	equence 72	equence 12,	7.7	3 6	3 6	2 .	30,	3 6	7 .	Sequence /2, App.	77

ALIGNMENTS

								٠.	٠.	٠.	٠.	٠.	٠.	٠.	٠.	٠.	٠.	٠.			٠.	٠.	٠.	٠.	٠.	٠.	••	••	٠.	٠.	٠.	٠.	٠	٠ ج	: 20	
יי יי	יי קלי	; PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	5	g	FI	TI	11	ΑP	ΑP	AP	ΑP	AP	ΑP	AP	AP	ÀΡΙ	ΑP	AP:	GENI	Pub	: Seguence 72, A	RESULT	
PRIOR	PRIOR	PRIOR	PRIOR			PRIOR	•	PRIOR			PRIOR				PRIOR	CURRENT	CURRENT	FILE REFERENCE: P3530P1C3	TITLE	TITLE	APPLICANT:	APPLICANT:	APPLICANT	APPLICANT	APPLICANT	APPLICANT	APPLICANT	APPLICANT	APPLICANT	APPLICANT	APPLICANT:	GENERAL INFORMATION:	Publication No. US20030149239A1	rence	, ,	
APPI	APPI	FILI	APPI	FILI	APPLICATION	FILING	APPLICATION	FILI	APPLICATION	FILING DATE:	APPLICATION	FILI	APPL	FILI	APPL	TEI	T AP	EFER	OF I	OF I	ANT:	ANT:	ANT:	ANT:	ANT:	ANT:	ANT:	ANT:	ANT:	ANT:	INT:	INF	cion	72	3	
APPLICATION	APPLICATION	NG	APPLICATION	200	ICAI		ICAT	NG D	ICAT	NG D	ICAT	NG D	ICAT	NG	ICAT	LING	PLIC	ENCE	NVEN	NVEN	WO	Wa	18	Sm	Gu	Gr	ရု	ດູ	Ge	De	Bak	DRMA'	No.	A P)	
APPLICATION N					NOI	DATE:		FILING DATE:		ATE:	NOI	ATE:	NOI	ATE:	NOI	DAT	ATIC	. P3	INVENTION:	INVENTION:	ď,	Watanabe,	epha	Smith,	Gurney,	imal	Godowski,	ddar	rrit	Desnoyers,	er,	TION	ับรว	olic		
	NOM	199	MUME	199	NUME	199	NUME	199	NUME	199	NUME	199	NUME	200	NUME	m	N	530E	 >		Will	be,	p, J	Vic		Grimaldi, J.	χ <u>ι</u> ,	d, A	sen,	ers,	Baker, Kevin P.		0030	atio		
1998-03-25 TUMBER: 60/	BER:	1998-03-20	BER:	1997-12-17	BER:	1997-10-31	ER:	1997-10-28	ER:	1997-10-17	NUMBER: 60	FILING DATE: 1997-09-17	ER:	FILING DATE: 2002-04-09	ER:	2002	MBER	1C3	ACIDS	CRET	Wood, William I.	Colin	ean-	Victoria	Austin L	٠. د	Paul J	Goddard, Audrey	Gerritsen, Mary	Puc	. ד	j	1492	n US		
60/	60/	3-20	60/0	2-17	60/0)-31	60/0	28	60/0)-17	60/0	17	60/0	60-	10/1	FILING DATE: 2002-08-09	: US			ED P	Ħ.	n L.	Phil	עם	Ľ	hris	<u>.</u>	Υ	Υ				39A1	/102		
60/079656	NUMBER: 60/079294		NUMBER: 60/078910		NUMBER: 60/069873		NUMBER: 60/064103		NUMBER: 60/063549		/062287		APPLICATION NUMBER: 60/059113		APPLICATION NUMBER: 10/119,480	9	/10/		ODIN	B			Stephan, Jean-Philippe			Christopher								Sequence 72, Application US/10216163		
9,	4		5		73		ü		9	,	37	i	ω	•	0.8)	APPLICATION NUMBER: US/10/216,163		G H	RANS			'n			er								w		
																	163	,	ENCODING THE SAME	MEME																
																			X	SECRETED AND TRANSMEMBRANE																
																				YEE	;															
																				PROTITURA A TOCA	3															
																				S AND																
																				MOCHETC	5															
																				ć	'n															

```
; TYPE: PRT; ORGANISM: Homo Sapien US-10-216-163-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
US-10-218-765-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-0-1/
PRIOR APPLICATION NUMBER: 00/062287
PRIOR EILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 111; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 72, Application US/10218765 Publication No. US20030187201A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 72
LENGTH: 128
TYPE: 7.778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
APPLICANT: Goddard, Audre
                                                                          PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/218,765
CURRENT FILING DATE: 2002-08-12
PRICE APPLICATION NUMBER: 10/119,480
PRICE APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/059113 PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3530P1C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                    APPLICATION NUMBER: 60/079728
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/081819
                                                                                                                 APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                         FILING DATE: 1997-12-17
APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/079294
                  APPLICATION NUMBER: 60/081955
                                                                                                                                                       FILING DATE: 1998-03-25
                                      FILING DATE: 1998-04-15
                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 KKGQQİYVYSKLVKENGAĞEFWAGSVYGDGQDEMĞVVĞYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MARILLELPGLVÁVCAVHGIFMORLASKKLCÁDDECVÝTÍSLÁSÁQEDYNÁPDCRFÍNV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MARILILLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Goddwski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFFSNLVREQRVYQEATKEIFT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephan, Jean-Philippe F. Watanabe, Colin L.
DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , William I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 600; DB 12;
Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 12; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR APPLICATION NUMBER: 60/085323 FILING DATE: 1998-05-13 APPLICATION NUMBER: 60/084441 APPLICATION NUMBER: 60/099596 FILING DATE: 1998-09-09 APPLICATION NUMBER: 60/099598 APPLICATION NUMBER: 60/097986
FILING DATE: 1998-08-26
APPLICATION NUMBER: 60/098544
FILING DATE: 1998-08-31 APPLICATION NUMBER: 60/095302 FILING DATE: 1998-08-04 APPLICATION NUMBER: 60/095318 FILING DATE: 1998-08-04 APPLICATION NUMBER: 60/090695 FILLING DATE: 1998-06-25 APPLICATION NUMBER: 60/091982 FILLING DATE: 1998-07-07 APPLICATION NUMBER: 60/090472
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090691 APPLICATION NUMBER: 60/085579 APPLICATION NUMBER: 60/082804 FILING DATE: 1998-04-22 APPLICATION NUMBER: 60/100390 FILING DATE: 1998-09-15 APPLICATION NUMBER: 60/100627 APPLICATION NUMBER: 60/100038 FILING DATE: 1998-09-11 APPLICATION NUMBER: 60/100385 FILING DATE: 1998-09-10
APPLICATION NUMBER: 60/099811
FILING DATE: 1998-09-10
APPLICATION NUMBER: 60/099812 APPLICATION NUMBER: 60/099803 APPLICATION NUMBER: 60/096791 FILING DATE: 1998-08-17 APPLICATION NUMBER: 60/096146 FILING DATE: 1998-08-11 APPLICATION NUMBER: 60/095916 FILING DATE: 1998-08-10 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089905 APPLICATION NUMBER: 60/089532 APPLICATION NUMBER: 60/086392 APPLICATION NUMBER: 60/099816 FILING DATE: 1998-06-25 FILING DATE: 1998-06-APPLICATION NUMBER: 60/089538 FILING DATE: 1998-06-FILING DATE: FILING DATE: 1998-09-24
APPLICATION NUMBER: 60/101786
FILING DATE: 1998-09-25
APPLICATION NUMBER: 60/101916 FILING DATE: 1998-09-23
APPLICATION NUMBER: 60/101738 APPLICATION NUMBER: 60/100919 FILING DATE: 1998-09-24
APPLICATION NUMBER: 60/101741 APPLICATION NUMBER: 60/101477 FILING DATE: APPLICATION NUMBER: 60/100848 FILING DATE: FILING DATE: 1998-09-15 FILING DATE: 1998-09-10 LING DATE: 1998-05-06 1998-05-22 1998-09-17 1998-09-1

```
PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/119549
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/123618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/115733 PRIOR FILING DATE: 1999-01-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/131022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OR FILING DATE: 1998-09-24
CR APPLICATION NUMBER: 60/106178
CR FILING DATE: 1998-10-28
OR FILING DATE: 1998-10-29
OR FILING DATE: 1998-10-29
OR FILING DATE: 1998-10-30
OR FILING DATE: 1998-10-30
OR FILING DATE: 1998-10-30
OR APPLICATION NUMBER: 60/140723
OR PILING DATE: 1999-06-22
OR APPLICATION NUMBER: 60/141037
OR FILING DATE: 1999-06-23
OR APPLICATION NUMBER: 60/144758
OR FILING DATE: 1999-07-20
OR APPLICATION NUMBER: 60/146698
OR FILING DATE: 1999-07-26
OR APPLICATION NUMBER: 60/146222
OR FILING DATE: 1999-07-28
OR RILING DATE: 1999-08-03
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR APPLICATION NUMBER: 60/149320
OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/149638
OR FILING DATE: 1999-08-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-11-17
APPLICATION NUMBER: 60/108801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/108787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-11-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1999-03-10
APPLICATION NUMBER: 60/125259
FILING DATE: 1999-03-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-12-23
APPLICATION NUMBER: 60/113621
FILING DATE: 1998-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/106905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/101922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/125775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/113605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-12-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-11-18
APPLICATION NUMBER: 60/112422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/108849
                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1999-04-28
APPLICATION NUMBER: 60/134287
FILING DATE: 1999-05-14
APPLICATION NUMBER: 60/140650
FILING DATE: 1999-06-22
FILING DATE: 1999-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1999-04-05
APPLICATION NUMBER: 60/130232
FILING DATE: 1999-04-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1999-03-23
APPLICATION NUMBER: 60/126773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/115565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1999-01-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/115558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/113296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1999-04-27
APPLICATION NUMBER: 60/131291
FILING DATE: 1999-04-27
APPLICATION NUMBER: 60/131445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1999-04-26
APPLICATION NUMBER: 60/131270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/127887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1999-03-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1999-01-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-12-22
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/151733
PRIOR FILING DATE: 1999-08-31
PRIOR APPLICATION NUMBER: 60/164418
PRIOR FILING DATE: 1999-11-09
PRIOR APPLICATION NUMBER: 60/166361
PRIOR FILING DATE: 1999-11-16
PRIOR APPLICATION NUMBER: 60/169445
PRIOR FILING DATE: 1999-12-07
PRIOR PILING DATE: 1999-12-07
PRIOR APPLICATION NUMBER: 60/169495
PRIOR APPLICATION NUMBER: 60/169495
PRIOR FILING DATE: 1999-12-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-219-063-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
PRIOR FILING LOSS.

PRIOR APPLICATION NUMBER: 03-26

PRIOR FILING DATE: 1998-03-26

PRIOR PRIOR PRILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-27

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PRIOR FILING DATE: 1998-03-26

PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 72, Application US/10219063
Publication No. US20030187202A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: 93530P1C24
CURRENT APPLICATION NUMBER: US/10/219,063
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                     OR FILING DATE: 1997-12-17
OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079294
OR FILING DATE: 1998-03-25
OR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1997-10-31 APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 TOIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 TDIDEFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 KKGQQIYYYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYGEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 KKGQQIYVYSKLYTENGAGAFWAGSYYGDHQDEMGIVGYFPSNLYREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MARILLLFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MARILILLEGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Watanabe, Colin
Wood, William I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 600; DB 12;
Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                  PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: PRT; ORGANISM: Homo Sapien US-10-219-063-72
                                                                 Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 72
LENGTH: 128
TYPE: PRT
ORGANISM: Homo Sapien
US-10-219-066-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-219-066-72
                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/219,066
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06349
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069073
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 72, Application US/10219066 Publication No. US20030187203A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wacd, William I.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88.8%;
Local Similarity 86.7%;
es 111; Conservative
                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/079656 FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MARILILLLGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kevin P.
  86.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 600; DB 12;
Pred. No. 4.5e-65;
     Score 600; DB 12;
Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 246
; SEQ ID NO 72
; LENCTH: 128
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-067-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-219-067-72
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Publication No. US20030187204A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 72,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                 Matches 111;
                                                                                                          Best
                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mar APPLICANT: Goddard, Audre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: P3530P1C51
CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Warenabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/064103 PRIOR FILING DATE: 1997-10-31
                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TRIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 111; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 KKGQQİYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MARILILLIGGLVALCAGHGMFMDKLSSKKLCADEBCVYTISLARAQEDVNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILLFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                      1 MARILILLIGGIVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                            Similarity
Application US/10219067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
                                                                                      Conservative
                                                                               88.8%; Score 600; DB 12; Length 128;
86.7%; Pred. No. 4.5e-65;
tive 9; Mismatches 8; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                        Gaps
      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                        0
```

Ś

61 KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQBATKEIPT 120

```
; LENGTH: 128
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-068-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILLE OF LIVENION: PCID PROCESS
FILE REFERENCES: 93530FC31
CURRENT APPLICATION NUMBER: US/10/219,068
CURRENT FILING DATE: 2002-06-13
PRIOR PPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/063649
PRIOR APPLICATION NUMBER: 60/063649
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-1
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-27
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-219-068-72
                                        Ś
                                                                                       밁
                                                                                                                             Ş
                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION P.
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 72, Application US/10219068 Publication No. US20030187205A1
                                                                                                                                                                                                                                                                                              Query Match 88.8%;
Best Local Similarity 86.7%;
                                                                                                                                                                                                                                                                       Matches 111; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TOIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 TDIDFFCE 128
121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 KKGQQIYYYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                             121 TDIDFFCE 128
                                                                                          61
                                                                                                                                    61
                                                                                                                                                                               KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIFT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                       KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
                                                                                                                                                                                                                                                                           9;
                                                                                                                                                                                                                                                                           Score 600; DB 12; Length 128; Pred. No. 4.5e-65; 9; Mismatches 8; Indels
                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                              Gaps
```

```
US-10-219-069-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
                                                                                                            S
                                                                                                                                                             밁
                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: P3530P1C40
CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/062887
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-069-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 72, Application US/10219069 Publication No. US20030187206A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                     Matches 111; Conservative
                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Homo Sapien
                                                                   121 TDIDFFCE 128
                                                                                                               121 TDIDFFCE 128
                                                                                                                                                             61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                       61 KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                 1 MARILILLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                      1 MARTILLFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTTSLASAQEDYNAPDCRFINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                        88.8%; Score 600; DB 12;
86.7%; Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                     9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                   DB 12;
                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                Length 128;
                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                60
```

US-10-219-073-72

Sequence 72, Application US/10219073 Publication No. US20030187207A1 GENERAL INFORMATION:

APPLICANT: Baker, Kevin P

```
RESULT 9
US-10-219-475-72
; Sequence 72, Application US/10219475
; Publication No. US20030187208A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: PRT; ORGANISM: Homo Sapien US-10-219-073-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILLING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILLING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILLING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILLING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                 APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P353091C52
CURRENT APPLICATION NUMBER: US/10/219,073
CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                         121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MARILILLGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MARILLEEPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                               TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIFT 120
                          Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88.8%; ilarity 86.7%; Conservative 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 600; DB 12;
Pred. No. 4.5e-65;
9; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 12; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-219-480-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo Sapien US-10-219-475-72
                                                                                                                                              APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul of APPLICANT: Grimaldi, J. Chal
APPLICANT: Grimer, Austin 1
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                   Sequence 72, Application US/10219480 Publication No. US20030187209A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
CURRENT APPLICATION NUMBER: US/10/219,480
                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079294 PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/219,475
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Watanabe, Colin L. APPLICANT: Wood, William I.
                                                                                                   APPLICANT:
                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 KKGQQIYYYSKLYTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MARILLLELEGIVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MARILILLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                              Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F.
Watanabe, Colin L.
Wood, William I.
                                                                                                                                                                                                                  Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88.8%; Score 600; DB 12;
86.7%; Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
```

```
RESULT 11
US-10-219-483-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: PRT; ORGANISM: Homo Sapien US-10-219-480-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 72, Application US/10219483 Publication No. US20030187210A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3509D1C43

CURRENT APPLICATION NUMBER: US/10/219,483

CURRENT FILING DATE: 2002-08-13

PRIOR APPLICATION NUMBER: 10/119,480

PRIOR APPLICATION NUMBER: 10/119,480

PRIOR APPLICATION NUMBER: 60/059113

PRIOR APPLICATION NUMBER: 60/059113

PRIOR APPLICATION NUMBER: 60/05287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/064103
PRIOR TILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILILLGGLVALCAGHGMEMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MARILLIFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 600; DB 12; Length 128; Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-219-525-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Homo Sapien US-10-219-483-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR TILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 72, Application US/102
Publication No. US20030187211A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 72
                                                                                                                                                                                        TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PIC29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
CURRENT FILING DATE: 2002-08-13
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
                                                 PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILLIFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MARILILLIGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10219525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 600; DB 12;
Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
US-10-219-526-72

; Sequence 72, Application US/10219526

; Publication No. US20030187212A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 128
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-525-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 88.8%;
Best Local Similarity 86.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-03-26 PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: P3530P1C41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
                                         OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079294
OR FILING DATE: 1998-03-25
OR APPLICATION NUMBER: 60/079656
OR FILING DATE: 1998-03-26
OR FILING DATE: 1998-03-26
FILING DATE: 1998-03-27
                        APPLICATION NUMBER: 60/079728
                                                                                                                                                                                     FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MARILLLFLPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MARTITITIGGIVALCAGHGMFMDKLSSKKLCADEECVYTTSLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 600; DB 12;
Pred No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; LENGTH: 128
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-219-526-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-530-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
                                                                                                       PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR PILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
SEQ ID NO 72
                                       SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 72, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 111; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                          Remaining Prior Application data removed - See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/069873 PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
TYPE: PRT
                  LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    / Match 88.8%;
Local Similarity 86.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MARILILLLGGLVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MARILLELPGLVAVCAVHGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski, Paul J.
Grimaldi, J., Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10219530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US20030187213A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 600; DB 12;
Pred. No. 4.5e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

; ORGANISM: Homo Sapien US-10-219-530-72

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                            ; ORGANISM: Homo Sapien US-10-219-531-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-531-72
                                                                                                                                                                                                          PRIOR FILING DATE: 1998-03-27

Remaining Prior Application data removed - See File Wrapper or PALM.

NUMBER OF SEQ ID NOS: 246

SEQ ID NO 72

LENGTH: 128
                                                  Matches 111; Conservative
                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 72, Application US/10219531 Publication No. US20030187214A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 88.8%; Score 600; DB 12; Length 128; Best Local Similarity 86.7%; Pred. No. 4.5e-65; Matches 111; Conservative 9; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C66
CURRENT APPLICATION NUMBER: US/10/219,531
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR PELING DATE: 2002-04-09
PRIOR PILING DATE: 2002-04-09
PRIOR PILING DATE: 2002-04-09
PRIOR PILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062387
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 TOIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 KKGQQIYVYSKLVKENGAGEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 KKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIFT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILILLIGGIVALCAGHGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                             88.8%; Score 600; DB 12;
86.7%; Pred. No. 4.5e-65;
rative 9; Mismatches 8;
                                                                                           Length 128;
                                                Indels
                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Search completed: December 29, 2003, 16:26:16 Job time: 17.5686 secs

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0% Maximum Match 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
                                                                                                                                                                                                                                                                                                                                                                                                            ő
        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                            Score
       74
74
74
73.5
73.5
73.5
73.5
73.5
                                                                                                                                                                                                                                                                                                          93.5
84.5
82.5
76.5
                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     328717 segs, 42310858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MARILILLGGLVALCAGHG.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December 29, 2003, 16:03:18; Search time 9.32213 Seconds (without alignments)
       Issued_Patents_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                            Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100%
    US-08-578-649-2
US-07-646-5378-2
US-07-646-5378-2
US-09-346-5108-21
US-09-346-5108-24
US-09-346-5108-24
US-09-346-5108-24
US-08-164-839-4
US-08-164-839-6
US-08-164-839-6
US-08-467-603-89
US-08-467-603-89
US-08-467-603-89
US-08-467-6118-89
US-08-630-9158-119
US-08-630-9158-19
US-08-630-9158-19
US-08-630-9158-38
US-09-286-691-12
US-09-286-691-12
US-09-286-691-12
US-09-286-591-33
US-08-164-839-31
US-08-164-839-31
US-08-583-799-33
US-08-583-799-33
US-08-583-799-33
US-08-583-799-33
US-08-583-799-33
                                                                                                                                                                                                                                                                                                                                                                                                            H
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     580.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            328717
Sequence 2, Appli
Sequence 5, Appli
Sequence 21, Appli
Sequence 24, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 89, Appli
Sequence 89, Appli
Sequence 89, Appli
Sequence 194, Appli
Sequence 1194, Appli
Sequence 210, Appli
Sequence 210, Appli
Sequence 210, Appli
Sequence 210, Appli
Sequence 210, Appli
Sequence 210, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 4886, Appli
Sequence 4886, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
                                                                                                                                                                                                                                                                                                                                                                                                           Description
```

Ś

Query Match 40.8%; Score 275.5; DB 1; Best Local Similarity 44.4%; Pred. No. 5.1e-27; Matches 60; Conservative 27; Mismatches 37;

1 MARILILLLGGLVALCA--GHGMF---MDKLSSKKLCADEECVYTISLARAQEDYNAPDC

Indels 11; Gaps

S

Length 131;

RESULT 1 US-08-578-649-2 Sequence 2, Application US/085786 Patent No. 570366 Patent N	28 66.5 9.8 68 30 66.5 9.8 68 31 66.5 9.8 68 32 66 9.8 28 33 66 9.8 28 34 66 9.8 28 36 66 9.8 28 37 66 9.8 28 37 66 9.8 28 37 66 9.8 37 40 66 9.8 37 41 66 9.8 37 42 66 9.8 37 43 66 9.8 37
on US/08578649 1 Bogdan 1 Bogdan 2 MELANOMA-INHIBITING PROTEIN 2 S: 24 MESS: 2 E & Lynch 2 Inch 1.44 Mb storage diskette 2 Sinch 1.44 Mb storage diskette 2 S/2 FORM: 5 Inch 1.44 Mb storage diskette 2 S/2 FORM: 5 Inch 1.44 Mb storage diskette 2 S/2 1 PC-DOS 2	88 1 US-08-164-839-72 88 1 US-08-583-799-70 88 1 US-08-583-799-72 88 1 US-08-459-967-8 80 1 US-08-459-967-8 80 1 US-08-459-871-8 80 1 US-08-459-871-8 80 1 US-09-104-633-2 80 4 US-09-104-633-2 80 4 US-09-104-633-2 80 4 US-09-114-359A-2 80 1 US-08-459-967-6 97 1 US-08-459-967-6 97 1 US-08-459-967-2 80 4 US-09-104-255-6 97 1 US-08-459-967-2 80 4 US-08-459-967-2 80 4 US-08-459-967-2 80 4 US-08-459-967-2
	Sequence 72, Appl Sequence 70, Appl Sequence 8, Appli Sequence 8, Appli Sequence 8, Appli Sequence 8, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 4, Appli

```
S
                                        Ş
                                                                                        밁
                                                                                                                                 Ś
                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                      ; MOLECULE TYPE: protein US-08-578-649-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-578-649-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 5, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
GENERAL INFORMATION:
GAPPLICANT: Ultich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
APPLICANT: Brigitte Kaluza
APPLICANT: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P '
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILLING DATE: 29-July-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
STREET: 805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 incl
                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PS/
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: New York
                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     114 ATKEIPTTDIDFFCE 128
123 DOWDFYCO 130
                                           121 TDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        117 GKVDVKTDKWDFYCQ 131
                                                                                          66 ĠQVVÝVFŠKĹ---KGRGRLFWGGŠVQGGYYGDLAARLGYFPŠSIVREDLNSKPGKIDMKT 122
                                                                                                                                 63 GQQIYVYSKLVTENGAG-AFWAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60 RFLTIHRGQVVYVFSKL---KGRGRLFWGGSVQGDYYGDLAARLGYFPSSIVREDQTLKP 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56 RFINVKKGQQIYVYSKLVTENGAG-AFWAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQE 113
                                                                                                                                                                                                                                                                           55;
                                                                                                                                                                                                             8 LLGGLVALCAGHG-----MFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MARSLV-CLGVIILLSAFSGPGVRGGPMPKLADRKLCADQECSHPISMAVALQDYMAPDC 59
                                                                                                                                                                                   6 VLLGIVVLSVFSGPSRADRAMPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYR 65
                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New York
                                                                                                                                                                                                                                                                       36.5%; Score 247; DB 1; Length 130; milarity 43.0%; Pred. No. 2e-23; Conservative 22; Mismatches 41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: 3.5 inch 1.44 Mb storage diskette IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DE P 43 24 247.2
                                                                                                                                                                                                                                                                           41; Indels 10; Gaps
```

RESULT 3

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/07646537B; Patent No. 5348864; GENERAL INFORMATION:
; NAME/KEY: Domain ; OTHER INFORMATION: amino acid sequence of Vav SH3 domain US-09-346-510B-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-07-646-537B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-07-646-537B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-346-510B-21
                                                                                                                        FILE REFERENCE: D6221CIP
CURRENT APPLICATION NUMBER: US/09/346,510B
CURRENT FILING DATE: 1999-07-01
PRIOR APPLICATION NUMBER: 08/871,732
PRIOR FILING DATE: 1997-06-09
NUMBER OF SEQ ID NOS: 32
SEQ ID NO 21
LENGTH: 54
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 21, Application US/09346510B Patent No. 6281014
                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                       APPLICANT: O'Brien, Timothy J
APPLICANT: Wang, Yinxiang
TITLE OF INVENTION: SH3-Contai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (609) 921-4526
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 844 amino acids
TYPE: amino acids
                                                             TYPE: PRT
ORGANISM: unknown
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 33,111
REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 921-5901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION: NAME: Gaul, Timothy J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1. CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Barbacid, Mariano
TITLE OF INVENTION: Vav Proto-Oncogene Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 13.8%; Score 93.5; DB 1; Length 844; Local Similarity 32.9%; Pred. No. 0.0079;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 08543-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  835 YVEED--YSE 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           104 LVREQRVYQE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      786 ÁKÁRYDFCÁRDRSELSLKEGDIÍ----KILNKKGQQGWWRGEIYGR-----IGWFPSN 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New Jersey
7: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P.O. Box 4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bristol-Myers Squibb Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 435
                                                                                                                                                                                                                                                                                                          SH3-Containing Protein, DNA and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/07/646,537B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20; Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

```
US-09-346-510B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
US-09-356-952-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Saccharomyces cerevisiae US-09-356-952-4
                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/346,510B
CURRENT FILING DATE: 1999-07-01
PRIOR APPLICATION NUMBER: 08/871,732
PRIOR FILING DATE: 1997-06-09
NUMBER OF SEQ ID NOS: 32
SEQ ID NO 24
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 24, Application US/09346510B Patent No. 6281014 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/09356952 Patent No. 6117663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 12.5%; Score 84.5; DB 3; Length 54; Best Local Similarity 32.3%; Pred. No. 0.002; Matches 20; Conservative 13; Mismatches 18; Indels 11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Boriack-Sjodin, Ann
APPLICANT: Margarit, S. M.
APPLICANT: Margarit, S. M.
APPLICANT: Bor-Sogi, Dafna
APPLICANT: Cole, Philip
APPLICANT: Cole, Philip
APPLICANT: Kuriyan, John
TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF USE
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 600-1-228N
CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT FILING DATE: 1998-07-21
EARLIER APPLICATION UMBER: 60/093,631
EARLIER FILING DATE: 1998-07-21
NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                              APPLICANT: O'Brien, Timothy J.
APPLICANT: Wang, Yinxiang
TITLE OF INVENTION: $43-Contain
FILE REFERENCE: D6221CIP
FEATURE:
NAME/KEY: Domain
LOCATION: 2...49
                                                                 TYPE: PRT
ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 1589
                                                                                                                            LENGTH: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100 WWDGLVIDDSNGKVN-RGWFPQNFGRPLR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106 RE 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50 EE 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81 FWAGSVYGDHQDEMGIVGYFPSNLVREQR 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45 LSSSPSTSELTSIRPIGIVVAAYDFNYPIKKDSSSQLLSVQQGETIYILNK----NSSG- 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26 LSSKKLCADEECVYTISLARAQEDYNAP----DCRFINVKKGQQIYVYSKLVTENGAGA 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46 AQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLV 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----VGWFPANYV 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12.2%;
                                                                                                                                                                                                                                                                                                                       SH3-Containing Protein, DNA and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 82.5; DB 3; Length 1589; Pred. No. 0.49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
```

```
밁
                                                                                      밁
                                                                                                                                                                                                                                                                  ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-164-839-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-346-510B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-164-839-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: YASUEDA
APPLICANT: NAKANIS
APPLICANT: MOTOKI,
                                                                                                                                                                     Query Match 10.9%; Score 74; DB 1; Length 694; Best Local Similarity 26.2%; Pred. No. 1.8; Matches 21; Conservative 21; Mismatches 28; Indels .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/08164839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: amino acid sequence of Vav SH3 domain at position 2 OTHER INFORMATION: through position 49 of SEQ ID No. 6281014 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-599-0
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 22202
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: NAKANISHI, KAZUO
APPLICANT: NOTOKI, MASAO
APPLICANT: NAGASE, KAZUO
APPLICANT: NAGASE, KAZUO
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/0
FILING DATE: 14-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity hes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (///, -2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/164,839 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 1755 Jefferson Davis Highway, Fourth Floor CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: U
ZIP: 22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                 392 EVNADTIYWIVQXDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 446
447 KEREVYKKAGRRVTEPSNEI 466
                                     106 REQRVYQEATKEI -- PTTDI 123
                                                                                                                             49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLV 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 DFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----VGWFPANYV 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5514573
                                                                                                                                                                                                                                                                                                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Virginia
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YASUEDA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.3%; Score 76.5; DB 3; Length 48; 31.6%; Pred. No. 0.018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08/004,729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12; Mismatches
                                                                                                                                                                         28; Indels . 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
```

```
Ş
                                                                                                                                                                   RESULT 9
                                                                                                                                                                                                                                                                                                                 뭥
                                                                                                                                                  US-08-164-839-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-583-799-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-583-799-4
                                                              Sequence 6, Application US/08164839
Patent No. 5514573
GENERAL INFORMATION:
APPLICANT: YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/08583799 Patent No. 5607849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5607849man F.
REGISTRATION NUMBER: 24,518
REFERENCE/DOCKET NUMBER: 10-599-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/583,799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: YASUEDA, HISAS
APPLICANT: NAKANISHI, KAZ
APPLICANT: MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: NAGASE, KAZUO
APPLICANT: MATSUI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 1755 Je:
CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: P.C.
STREET: 1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                               447 KEREVYKKAGRRVTEPSNEI 466
                                                                                                                                                                                                                                                                        106 REQRVYQEATKEI -- PTTDI 123
                                                                                                                                                                                                                                                                                                               392 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 446
                                                                                                                                                                                                                                                                                                                                                      49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  694 amino acids
NAKANISHI, KAZUO
MOTOKI, MASAO
NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                              10.9%; Score 74; DB 1; Length 694; ilarity 26.2%; Pred. No. 1.8; Conservative 21; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-599-0
                                                                                                                                                                                                                                                                                                                                                                                              10; Gaps
                                                                                                                                                                                                                                                                                                                                                                                              ω
--
```

```
RESULT 10
US-08-583-799-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: protein US-08-164-839-6
                                                                                                                                                                                                                                             PATENT NO. 5607849
GENERAL INFORMATION:
APPLICANT: YASUEDA
APPLICANT: MAKANIS!
APPLICANT: MOTOKI,
                                                                                                                                                                                                                                                                                                                                                   Sequence 6, Application US/08583799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (703)412-300
TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                     APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCOI
TITLE OF INVENTION: FROM FISH
NUMBER OF SEQUENCES: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 695 amino acid
                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/164,839
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
                                        STREET: 1755 Je:
CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 08/0 FILING DATE: 14-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 1755 Je:
CITY: Arlington
                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 10.9%; Score 74; DB 1; Length 695; Local Similarity 26.2%; Pred. No. 1.8; es 21; Conservative 21; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Oblon, No. 5514573man F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: Virginia COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       393 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                         448 KEREVYKKAGRRVTEPSNEI 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106 REQRVYQEATKEI -- PTTDI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acids
Virginia
7: U.S.A.
                                                           1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                  NAKANISHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                          MOTOKI, MASAO
NAGASE, KAZUO
                                                                                                                                                                                                                                                                                        YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
                                                                                                                                                                                    GENE ENCODING TRANSGLUTAMINASE DERIVED
                                                                                                                                                                                                                                                                       KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08/004,729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-583-799-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-467-603-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 89, Application US/08467603 Patent No. 5843672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 695 amino acids
TYPE: amino acid
TYPE: amino acid
                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII-text
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bizindaukas, Christine B.
APPLICANT: Brauer, Andrew W.
TITLE OF INVENTION: Allergenic Proteins and
TITLE OF INVENTION: Peptides from Dog
TITLE OF INVENTION: Dander and Uses Therefor
NUMBER OF SEQUENCES: 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Morgenstern, Jay P. APPLICANT: Kanieczny, Andrzey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-599-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                          COUNTRY: US
ZIP: 02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (/U3/TELEX: 248855 OPAT UR
                                                                FILING DATE:
                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                          CITY: Boston
STATE: MA
                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Oblon, No. 5607849man F. REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          448 KEREVYKKAGRRVTEPSNEI 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106 REQRVYQEATKEI -- PTIDI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               393 EVNADTIYWIYQKDGQR-----RKITEDHASYGKNISTKSYYGNHREDYTLHYKYPEGSQ 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22202
                                                                                                                                                                                                                                                                                                                                      60 State Street, suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (703)413-2220
                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.9%; Score 74; DB 1; Length 695; 26.2%; Pred. No. 1.8;
  US/08/156,549
                                                                                       US/08/467,603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/583,799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jay P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21; Mismatches 28; Indels 10; Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-466-793-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-467-603-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 89, Application US/08466793
Patent No. 5891716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (617) 227-594 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                             COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII-text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/466,793
FILING DATE: 06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: peptide FRAGMENT TYPE: internal
                                     FILING DATE: 22-NOV-1993
APPLICATION NUMBER: 07/999,712
FILING DATE: 31-Dec-92
ATTORNEY/AGENT INFORMATION:
                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: US 08/156,549
                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Morgenstern, Jay P.
APPLICANT: Kanieczny, Andrzey
APPLICANT: Bizindaukas, Christine B.
APPLICANT: Brauer, Andrew W.
TITLE OF INVENTION: Allergenic Prote
TITLE OF INVENTION: Peptides from Do-
                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 182 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 31-Dec-92
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 60 St
CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IMI-026CP(IPC-048CP)
NAME: Mandragouras, Amy E. REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.9%; Score 73.5; DB Local Similarity 24.7%; Pred. No. 0.29; es 37; Conservative 11; Mismarches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116 DYERYVMFHLVNVNNGEAFQLMELYGRTKD 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63 GQQIYVYSKLVTENGAGAFWAGSVYGDHQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30 ------KLCADE--ECVYTISLARAQEDYNAPDC-----RFINVKK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 FMQHIDVLENSLGFKLCIKENGECRKLYSVA----YKTPKIGEYFLEYDGGNTFTILKT 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MKLILLLCLGLILVCZGHAEEANSERGNLDVDKLNGDWFSIVVASNKREKIEENGSMRV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MARILILLEGELVALCAGH------GMFMDKL-----SSK------
                                                                                                                                                                                                                                                                                                                                                  02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                        ¥
                                                                                                                                                                                                                                                                                                                                                                                                                             60 State Street, suite 510
                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (617) 227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Allergenic Proteins and
Peptides from Dog
Dander and Uses Therefo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07/999,712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11; Mismatches 39; Indels 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6
```

```
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
AF243504
LOCUS
            BASE COUNT
                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                gene
                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                        Submitted (09-MAR-2000) Biotechnologies, Institut Pasteur, 25 rue du Dr. Roux, Paris 75015, France
                                                                                                                                                                                                                                                                                                                                                                                                                mesenchyme
J. Biol. Ch
                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 929)
Cohen-Salmon, M., Fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF243504 929 bp mRNA linear ROD 26-DEC-2000 MUS musculus fibrocyte-derived protein (Fdp) mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                   20568254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cohen-Salmon, M., Frenz, D., Liu, W., Verpy, E., Voegeling, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF243504.1 GI:11991841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF243504
                                                                                                                                                                                                                                                                                                                                                                                     10998416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCCTTGTGGTTCTATGTGCCGGGCATGGT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                             p, a new fibrocyte-derived protein related to MIA/CD-RAP, has an
vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 929)
            260
                                                                                                                                                                                                                                                                                                                                                                                                               . Chem. 275 (51), 40036-40041 (2000)
                /gene="Fdp"
/codon_start=1
/codon_start=1
/produci="fibrocyte-derived protein"
/protein_id="AAG42355.1"
/protein_id="AAG42355.1"
/protein_id="AAG42355.1"
/db_xref="gi:1199;1942.1"
/translation="MARTUILLLGGLVVICAGHGVFMDKLSSKKLCADEECVYTISLA
RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
NLVKEQRVYQEATKEIPTTDIDFFCE"
                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                'gene="Fdp"
                                                                                                                                                                                                                          strain="BALB/c"
                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                             db_xref="taxon:10090"
                                                                                                                                                                                             chromosome="2"
                                                                                                                                                    . 395
                                                                                                                                                                                  . 929
            156 c
                                                                                                                                                                                                                                                                                                                                                Frenz, D., Verpy, E., Voegeling, S. and Petit, C
           220 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
BD010821
LOCUS
                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-47 (1-128) x AF243504 (1-929)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
PC C07K14/
G01N33/53//
PC C12P21/
CC Key
FH Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                        PRPB
                                                                                                                                                                                                                                                                                                                                                                             Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                          JP 2001069994-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD010821
                                                                                           A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGGATATTGACTTCTTCTGTGAA 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ThraspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                            (bases 1 to 947)
                                                                                                                                                                                     21-MAR-2001
29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.66e-69
655,00
98.44%
96.09%
96.89%
```

```
129 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel polypeptide and DNA thereof Patent: JP 2001069994-A 22 21-MAR-2001; TAKEDA CHEMICAL INDUSTRIES LTD OS Mus sp. (mouse) PN JP 2001069994-A/22
                                                                                                                                                                                          PI YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI MOGI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel polypeptide and DNA thereof.
BD010821
BD010821.1 GI:18639194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y.,
Yoshimura,K. and Tanaka,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT
                                                    C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                     YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02, PC
C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  68
```

ROD 06-JUL-2000

```
Ş
                                                                                         Ş
                                                                                                                               B
                                                                                                                                                                     Ş
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-47 (1-128) x MMU243939 (1-958)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      o
.
                                                                                           101
                                                                                                                                 264
                                                                                                                                                                                                          204
                                                                                                                                                                                                                                                                                      144
                                                                                                                                                                     81
                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                8
4
                                                                                                                                                                                                                                                                                                                                                                                        21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                       24 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21100875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (20-JUL-1999) Rendtorff N.D., Department of Medical Genetics, Institute of Medical Biochemistry and Genetics, Blegdamsvej 3, 2200 Copenhagen N, DENMARK Related sequence: AJ242552.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 (bases 1 to 958) Rendtorff, N.D.
                                                                                                                                                                                                                                                                                                                IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                           ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                   PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                          LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                  ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 203
                                                                                                                                                                                                                                                                                                                                                            GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 143
               ThrAspIleAspPhePheCysGlu 128
                                                   CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                      AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCTGGAGAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/product="melanoma inhibitory activity-like protein"
/protein_id="CAC27444.1"
/bb_xref="GI:12619175"
/translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="Mial"
24. .410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="Mial"
23. .81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NLVKEQRVYQEATKEIPTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /map="79.4-80 cM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tissue_type="whole fetus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.44%
96.09%
96.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.82e-69
655.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _stage="12.5 pc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                225 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299 t
                                                   383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                           ş
                                                               밁
                                                                                                   Ś
                                                                                                                                             밁
                                                                                                                                                                               Ş
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-47 (1-128) x AF233333 (1-1054)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF233333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sgo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                             198 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 257
                                                                                                                                           138 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           384 ACGGATATTGACTTCTTCTGTGAA 407
81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                     61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                             41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                              18 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT
                                                                                                                                                                                                                      78 GTATTTATGGATAAACTT
                                                                                                                                                                                                                                                      21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                              1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 1054)
Resendes, B.L., Weremowicz, S., Denis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C.
A novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus otoraplin mRNA, complete cds. AF233333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (10-FEB-2000) Pathology, Brigham and Women's Hospital, Francis Street, Boston, MA 02115, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 (bases 1 to 1054)
Robertson, N.G., Heller, S., Lin, J.S., Resendes, B.L., Weremowicz, S., Denis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genomics 66 (3), 242-248 (2000)
20334619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF233333.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10873378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="OTOR"
/codon_tart=1
/codon_tart=1
/product="otoraplin"
/protein_id="AAF82079.1"
/db_xref="G1:8927430"
/tanslation="MARILILLIGIVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
RAQEDYNAPDCRFIDVKKGQQITVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
NLVKEGRVYQEATKEIFTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                 98.44%
96.09%
96.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.34e-69
655.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:8927429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         183 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      type="mRNA"
                                                                                                                                                                                                                    CTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     265 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1054 bp
                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           310 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
```

```
Ş
                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                      В
                                                                                                                                                    Ś
                                                                                                                                                                                   US-10-019-455A-47 (1-128) x BD010802 (1-384)
                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD010802
                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                        source
121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      258 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 317
                                                        41 IleSerLeuAlaArgAlaGinGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A61P19/08,
PC C07K14/
G01N33/53//
                                                                                                                                                   1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 3 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel polypeptide and DNA thereof. BD010802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PP PS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JP 2001069994-A/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD010802.1 GI:18639175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD010802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACGGATATTGACTTCTTCTGTGAA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 377
ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT 180
                                                                                                                       ATGCCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
JP 2001069994-A/3
                                                                                                                                                                                                                                                                                                                                                                                                                            /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-MAR-200:
                                                                                                                                                                                                                                                                                                                                                                                                                         1. .384
                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="genomic DNA"
                                                                                                                                                                                                                            7.09e-63
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                          70 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                          106 g
                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
BD093103
            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             융
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                      Ś
                                                                        US-10-019-455A-47 (1-128) x BD093103 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                    Query Match:
                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                    Percent Similarity:
                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAI
                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 ACGGATATTGACTTCTTCTGCGAG 384
           Novel polypeptide and its DNA.
BD093103
BD093103.1 GI:22638691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WC 0102564-A/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                         A61K38/17
                                                                                                                                                                                                                                               99 a
                                                                                                                                                                                                                                                                                                                                           Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                          02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
WO 0102564-A/3
                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
70 c 106 g 10
                                                                                                                  600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                   7.09e-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      384 bp
                                                                                                      Gaps:
                                                                                                                      Indels:
                                                                                                                                                                 Matches:
                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                 109 t
```

```
101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 3 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61K39/395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088// (C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers.
Mismatches:
                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 27-AUG-2002
```

```
RESULT 12
AX358818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                     Ş
                                                  밁
                                                                                                    망
                                                                                                                           S
                                                                                                                                                        US-10-019-455A-47 (1-128) x AX358818 (1-521)
                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                 NO. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361 ACGGATATTGACTTCTTCTGCGAG 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                         41
                                                                         21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521 bp
Sequence 71 from Patent W00193983.
                                                                                                                                                                                                                                                                                                                                                                                                                                Baker, K.P., Desnoyers, L., Gerritsen, M.E., Goddard, A., Godowski, P.J., Grimaldi, J.C., Gurney, A.L., Smith, V., Stephan, J.P., Watanabe, C.K. and Wood, W.I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX358818.1 GI:18675310
                                                                                                                                                                                                                                                                                                                                                                              Genentech
                                                                                                                                                                                                                                                                                                                                                                                            Patent: WO 0193983-A 71 13-DEC-2001;
                                                                                                                                                                                                                                                                                                                                                                                                           the same
                                                                                                                                                                                                                                                                                                                                                                                                                     Secreted and transmembrane polypeptides and nucleic acids encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                  MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 240
                                                                                                       ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA 97
                                                                                                                                                                                                                                                                                                     167 a
                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
86 c 131 g 13
                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                            9.85e-63
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                 (SD)
                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                Gaps:
                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
  217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX362311
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                     Ś
                                                   밁
                                                                       Ş
                                                                                                     밁
                                                                                                                              Ś
                                                                                                                                                        跊
                                                                                                                                                                               δ
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
 В
                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  218
 278
                                                   218
                                                                                                       158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18
                           81
                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the same
```

```
US-10-019-455A-47 (1-128) x AX362311 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          398 ACCGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                          61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                               21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40 ....|||||||||:::||||||||||| 40
                                                                                                                                                                                                                                                                                                   98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                                                                                                                                                                                                                                                                      38 ATGGCAAGAATATTGTTACTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                521 bp
Sequence 71 from Patent W00208288.
AX362311
                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Baker, K.P., Desnoyers, L., Gerritsen, M.E., Goddard, A., Godowski, P.J., Grimaldi, J.C., Gurney, A.L., Smith, V., Watanabe, C.K. and Wood, W.I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent: WO 0208288-A 71 31-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Secreted and transmembrane polypeptides and nucleic acids encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX362311.1 GI:18694613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.85e-63
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     131 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 15-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, J.P.,
  337
                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          337
                                                                                                                                                                                                                                                                                                                                                                                                           97
                                                                                                                                                                                                    217
```

```
문
                                                                            Ś
                                                                                                                        맑
                                                                                                                                                      S
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                           ફ
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     용
                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-47 (1-128) x AX454774 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX454774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                       158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       338
    101
                                                                                                                        218
                                                                                                                                                              5
                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                         98
                                                                                                                                                                                                                                                                                                          disorders involving angiogenesis
Patent: WO 0208284-A 359 31-JAN-2002;
Genentech, Inc. (US); Baker, Kevin P. (US); Ferrara, Napoleone
(US); Gerber, Hanspeter (US); Gerritsen, Mary E. (US); Goddard,
Audrey (US); Godowski, Paul J. (US); Gurney, Austin L. (US);
Hillan, Kenneth J. (US); Marsters, Scot A. (US); Pan, James (US);
Paoni, Nicholas F. (US); Stephan, Jean-Philippe F. (US);
Watanabe, Colin K. (US); Williams, P. Mickey (US); Wood, William
I. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baker,K.P., Ferrara,N., Gerber,H., Gerritsen,M.E., Goddard,A., Godowski,P.J., Gurney,A.L., Hillan,K.J., Marsters,S.A., Pan,J., Paoni,N.F., Stephan,J.P., Watanabe,C.K., Williams,P.M., Wood,W.I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 359 from Patent WO0208284. 
AX454774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Compositions and methods for the diagnosis and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Ye, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX454774.1 GI:21714011
                                                                                                                        AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                              LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                         ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                          IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                         MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ThraspileaspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                        TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                   PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                       ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                        ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="genomic DN/
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.85e-63
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 06-JUL-2002
                                                                                                                        277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       397
                                        337
                                                                                                                                                                                                         217
```

```
AX491252
LOCUS
 밁
                             S
                                                                                         á
                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION ACCESSION
                                                              당
                                                                                                                                                         Ś
                                                                                                                                                                                          밁
                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-47 (1-128) x AX491252 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      338
   398
                                 121
                                                                                              101
                                                                                                                             278
                                                                                                                                                                                          218
                                                                                                                                                                                                                                                         158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                           81
                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                          21 MetPheMetAspLysLeuSerSerLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                      98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                      38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                       1 MetAlaArgIleLeulleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           disorders involving angiogenesis Patent: WO 0200690-A 359 03-JAN-2002; Genentech, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baker, K.P., Ferrara, N., Gerber, H., Gerritsen, M.E., Goddard, A., Goddowski, P.J., Gurney, A.L., Hillan, K.J., Marsters, S.A., Pan, J., Paoni, N.F., Stephan, J.P., Watanabe, C.K., Williams, P.M., Wood, W.I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 359 from Patent W00200690.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Compositions and methods for the diagnosis and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and Ye, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX491252.1 GI:22323963
ACGGATATTGACTTCTTCTGCGAG 421
                     ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                              LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                          ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                   IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                       PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DN/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.85e-63
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   521
111
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 16-AUG-2002
                                                                                                                                                                                          277
                                                              397
                                                                                                                             337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         397
                                                                                                                                                                                                                                                         217
                                                                                                                                                                                                                                                                                                                                                                                      97
```

Search completed: December 29, 2003, 19:57:22 Job time : 2108.98 secs

```
GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
```

```
Command line parameters:

-MODEL=frame p2n.model -DEV=xlh
-MODEL=frame p2n.model -DEV=xlh
-Q=/cgn2 1/USFTO spool/US10019455/runat 29122003 160347 254/app query.fasta_1.1770
-Q=/cgn2 1/USFTO spool/US10019455/runat 29122003 160347 254/app query.fasta_1.1770
-DS=EST -QFMT=fastap -SUFFIX=rst -MINMATCH=0.1 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=-0 -MAXLEN=2000000000
-USER=US10019455 @GCN 1 1 6063 @runat 29122003 160347 254 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBIOCK=100 -LONGLOG
-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPDP=10 -XGAPDXT=0.5 -FGAPOP=6
-EGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seg length: 0
Maximum DB seg length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM protein - nucleic search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       December 29, 2003, 16:23:14; Search time 1324.28 Seconds (without alignments) 2349.180 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
         22781392 seqs, 12152238056 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MARILILLIGGLVALCAGHG......RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                     em estro

gb est2: *

gb est2: *

gb htc: * *

gb est3: * *

gb est3: * *
em_gss_pro:*
em_gss_rod:*
em_gss_phg:*
em_gss_vr1:*
gb_gss1:*
                                                                                                                    em_gss_pln:*
em_gss_vrt:*
em_gss_fun:*
em_gss_mam:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_esthum:*
em_estin:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                             em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_estov:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em estmu: *
                                                                                                                                                                                             em_gss_inv:*
                                                                                                em_gss_mus:*
                                                                                                                                                                                                                                  em_estom:*
                                                                                                                                                                                                                                                        em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.0
```

gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

į.		C 44	4	42	4	۵.	c 39		ı.	دیا	ω G	34	33	32	31	30	29	28	c 27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	თ	ហ	4	w	2	ш	Result
٥ -	3	63	<u>წ</u>	65.	٠	65.	σ	9	σ	O	J	75.	75.	75.	75.	75.	75.	75.	75.	75.		76.	41.	35	60.		80.	13.	N	N	9	N	ത	Q	N	4	S	S	Q. (2)	(J)	v	(J)	S	ū	u	
٥	י כ	9	9	9	9	9.	9	9	9	9	9	0		0	0	0	0	0	0	0	0	0	0	ν.	ω	'n	σ.	_	w	·	·	7.	·	7.	N	uı ·		σ.	96.9	٥,		თ	٥,	٠,	96.9	te
_	3	4	S	w	w	4	w	~	un	w	_	4	w	0	N	N	N	_	0	w	Œ	N	7	œ	~	4	w	9	œ	œ	N	0	σ	9	0	œ	7	9	630	0	σ	w	-	488	9	Length
<u>-</u> ي		μ W	9	14	14	ø	14	14	9	۰	10	12	12	12	13	<u>ц</u>	13	13	12	12	12	13	10	13	13	11	ø	13	13	13	10	13	L,	13	13	13	13	10	13	13	13	13	13	13	13	BEG
3 / 0 3 3	1	8	75598	CD360404	464	28214	0976	A4334	62729	59275	BE66572	BG76550	BG76632	BM79176	BU19456	BU15777	BQ68197	BQ89273	BM67425	BM85647	BM71593	BU19589	BB6479	BQ56677	BQ56322	AK04796	5854	4824	6517	o,	3644	6734	3262	6541	6693	056376	Q56563	B61154	œ	Q56494	Q56974	Ö S 6	Q56849	Q 56	Q57003	
#3/0303 0304/3 N	1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	0208982 UI-R-E	75598 qm48a04.x	D360404 AC	74647 zd77e05.	82143 zt(A509768 UI-R-F	433401 UI-H-CO	627297 ng68g01.	592759 AV592759	E665724 154861	65502 6027394	G766328	M791767 K-EST007	194561 AC	U157778 AGENCOUR	681978 AGENCOUR	892734 AGENCOUR	74250 UI-E-EJ0	56478 K-EST014	5936 UI-E-EJO	95892 AGENCOU	47928 BB647928	566776 gi69b07.	563227 gi01a05.	K047965 Mus mus	925854 AL925854	U748241 CH3#018	2565179 gi32a07.	2568785 gill4f0	E236443 144645	2567343 gi88d0E	Y232622 BY23262	2565411 gi37b12	<u> 2566932 gi73g09</u>	2563768 gi06c09	2565637 gi42g03	B611549 BB61154	68471 gi108g	2564944 gi27g09	<u>2569741 gil35f</u> 0	2564134 gilld01	2568498 gil09c0	2564607 gi19h0	2570035 gi143b10	Description

ALIGNMENTS

ACCESSION VERSION KEYWORDS RESULT 1 BQ570035 LOCUS DEFINITION BQ570035 398 bp mRNA linear EST 19-JUN-2002 gi143b10.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi143b10 5', mRNA sequence.

SOURCE ORGANISM Mus musculus (house mouse)
Mus musculus
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1 (bases 1 to 398) BQ570035 BQ570035.1 GI:21473352

REFERENCE

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: kacharb@nidcd.nih.gov
Plate: 143 row: b column: 10
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       onset of hearing
/elev stage="Post natal day 5 to 13"
//elone_lib="Mouse Organ of Corti. (DNA pBluescript," |
//clone_lib="Mouse Organ of Corti. (DNA pBluescript," |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA paint) |
//creygan of Corti. (DNA pain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="gi143b10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    location/Qualifiers
```

밁

Ş

밁

밁 Ş 밁 Ś Ś 밁 Ş 밁 Ş

멁

Percent Similarity: Best Local Similarity: US-10-019-455A-47 (1-128) x BQ570035 (1-398) Query Match: Alignment Scores: ORIGIN No.: 373 ACGGATATTGACTTCTTCTGTGAA 396 313 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 372 193 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 252 133 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATCGATGTC 192 81 61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80 41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60 73 GTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 132 21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40 13 AregeAAeeArArreArretrirectrieeeeeecerrereerretarereeeeeeeareer 72 1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20 ThrAspIleAspPhePheCysGlu 128 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 312 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100 105 City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." a 69 c 116 g 108 t 2.41e-80 655.00 98.44% 96.09% 96.89% Mismatches: Conservative: Indels:

BQ564607 LOCUS REFERENCE AUTHORS SOURCE ORGANISM COMMENT DEFINITION KEYWORDS ACCESSION ZERSION TITLE JOURNAL BQ564607 488 bp mRNA linear EST 19-JUN-200 gi19h02.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi19h02 5', mRNA sequence. Structural Cell Biology National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Email: kacharb@nidcd.nih.gov Plate: 19 row: h column: 0: Contact: Kachar, B EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1. (bases 1 to 488) Mus musculus BQ564607 BQ564607.1 GI:21467924 Seq primer: M13RP1 reverse primer (ABI). Unpublished Kachar, B. Fax: 301-402-1765 Mus musculus (house mouse) 301-402-1599 EST 19-JUN-2002

```
BASE COUNT
ORIGIN
                                                                      Alignment Scores:
Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                               / Sec. * marke and remarks
// Actors | Iba-**Nouse Organ of Corti, Vector, pbluescript, The
// Notes **Organ, Organ of Corti, Vector, pbluescript, The
// Actor | Iba-**Nouse Organ of Corti, Vector, pbluescript, The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (p) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P3. After killing animals by
cervical dislocation followed by decapitation, the build
was removed and opened in Lebowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
collars, was extrated using the micro Pasttrack kit
(catalog # K1533.02; Invitrogen, Carisbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Village and
very plantagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
sprihed with the linker-primer and transcribed using
vented with Na Dollar second strand was
primed with Na Dollar second strand was
ynthesized with DNA polymerase and RNase H. Complementary
DNA was blunt ended with Pfu DNA polymerase il space dwith
vented with Na Dollar second of Contech Allo Alto, CA)
very plantagene (La Jollar second of Contech Allo Alto, CA)
very plantagene (La Jollar second of Contech Vented Alto, CA)
ver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:10090"
/clone="gi19h02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Mus musculus"
655.00
98.44%
                                             3.26e-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          type="mRNA
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ568498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ568498
```

```
US-10-019-455A-47 (1-128) x BQ564607 (1-488)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        367 ACGGATATTGACTTCTTCTGTGAA 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               247 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187 AAGAAAGGGCAGAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67 GTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ568498 514 bp mRNA linear EST 19-JUN-2002 gi109c02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi109c02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MethlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: 109 row: c column: 02
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institute of Deal 50/4249 South Drive, NIH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 514)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ568498.1 GI:21471815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kacharb@nidcd.nih.gov
/sex="male and female"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clore_lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
                                                                                                                                                                                                                         /db_xref="taxon:10090"
/clone="gi109c02"
                                                                                                                                                                                                                                                                                           /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96.09%
96.89%
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deafness and other Communication Disorders VIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
```

```
US-10-019-455A-47 (1-128) x BQ568498 (1-514)
                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                   No.:
                                  21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                5 ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 64
                                                                                                          1 MethlaArgIleLeuIleLeuLeuClyGlyLeuValAlaLeuCysAlaGlyHisGly 20
GTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 12
                                                                                                                                                                                                                                                                                                                                                                                                     147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10; 14 from P12 and 24 from P13. After killing animals by cervical dislocation followed by decapitation, the bulla was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total RNA was extracted using the micro Fasttrack kit
                                                                                                                                                                                                                                                                                           3.52e-80
655.00
                                                                                                                                                                                                            98.44%
96.09%
96.89%
                                                                                                                                                                                                                                                   Conservative: Mismatches:
                                                                                                                                                                                                                                Indels:
```

5 밁 Ś Score:

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
BQ564134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     305 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     365 ACGGATATTGACTTCTTCTGTGAA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  534 bp mRNA linear E
gilld01.yl Mouse Organ of Corti cDNA pBluescript Mus
clone gilld01 5', mRNA sequence.
BQ564134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: 11 row: d column: 01 Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ564134.1 GI:21467451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 534)
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti; Vector: pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fastrack kit
(catalog # X1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone="gilld01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
```

```
US-10-019-455A-47 (1-128) x BQ564134 (1-534)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                           61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                              41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                    63 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                        AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   155 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ECOR I adapters in the presence of ligsse and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP xR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211201) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the phage in the phage of the plate in the phage in the phage of the plate of the phage individual cDNA clones were selected and provided from 200 ul of saturated culture with the phages.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid ollgo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNAse H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with DNA was blunt ended with Pfu DNA polymerase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Concert 96 (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from Stratagene (La Jolla, CA, USA), according to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       strength BigDye terminator sequencing chemistry (Applied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.44
96.09
96.89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    655.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.72e-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
```

S

В á 밁

문

Ś

맑

. No.:

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363 ACGGATATTGACTTCTTCTGTGAA 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ569741 560 bp mRNA linear EST 19-JUN-2002 gi135f01.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi135f01 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: kacharb@nidcd.nih.gov
Plate: 135 row: f column: 01
Seg primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Structural Cell Biology
National Institute of De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ569741.1 GI:21473058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301-402-1765
/dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 27612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo (dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcribed using
Moloney murine leukemia virus reverse transcribed
synthesized with DNA polymerase and RNase H. Complementary
DNA was blunt ended with Pfu DNA polymerase, ligated with
EcoR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deafness and other Communication Disorders
```

```
US-10-019-455A-47 (1-128) x BQ569741 (1-560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
No..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126
                                                                                                                                                                                                            366
                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ564944 608 bp mRNA linear EST 19-JUN-200: gi27g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi27g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MetAlaArgIleLeuIleLeuLeuLeuClyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 389
                                                                                                                                                                                                                                               ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 125
                                                                                                                                                                                                                                                                                                                                                CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 365
                                                                                                                                                                                                                                                                                                                                                                                   ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arggeaaggararigarierrirgerigggggeeerergregarerargieceggearggi 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           resistance helper phage (catalogue # 21203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96 (TM) plasmid purification kit (Invitrogen, carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster city, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."

12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   III Gold and, upon titration on XL1 Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4e-80
655.00
98.44*
96.09*
96.89*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
```

ORIGIN

BQ564944 LOCUS

RESULT 6

В Ś 밁 Ş 밁 Ş 밁 Ş 밁 Ş 밁

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kachar,B. \, EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ564944
BQ564944.1 GI:21468261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50/4249 South Drive, NIH, Bethesda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Structural Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               te: 27 row: g column: 09
[primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 608)
                                                                                                                 /dev grage="Post matal day > Colone 11b="Mouse Organ of Corti; Vector: pBluescript" The /note="Organ: Organ of Corti; Vector: pBluescript; The /note="Organ: Organ of Corti; Vector: pBluescript; The organ of Corti (CDM past fine dissected from a total of 386 organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The pBluescript; The organ of Corti; Vector: pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescript; The pBluescr
rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the concert96(TM) plasmid purification kit (Invitrogen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
/clone="gi27g09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dev_stage="Post natal day 5 to 13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Deafness and other Communication Disorders VIH, Bethesda, MD 20892-8027, USA
```

FEATURES source

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-47 (1-128) x BQ564944 (1-608)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                               CCESSION
   JOURNAL
                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         373 ACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                         630 bp mRNA linear EST 19-JUN-2002 gil08g04.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil08g04 5', mRNA sequence.
BQ568471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
Unpublished
                              onset of hearing
                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                          Mus musculus
                                                          EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                     Kachar, B.
                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                BQ568471.1 GI:21471788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTICTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTAGGTTATTTC 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                    (bases 1 to 630)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genes are present in GenBank and have know function; 23* have hits in GenBank, but do not have assigned function; 12* are uncharacterized ESTs and 20* are unidentified." 107 c 166 g 166 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.51e-80
655:00
98.44%
96.09%
96.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
```

Ş

ORIGIN

밁 Ş 밁 Ş В Ś B Ś 8 ş

RESULT 7

BQ568471

EYWORDS /ERSION

Contact: Kachar, B.

```
Structural Cell Biology
National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate: 108 row: g column: 04
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev stage="moute dud remains"
/dev stage="Tost natal day 5 to 13"
/dev stage="Tost natal day 5 to 13"
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Tosgan: Organ of Corti; Vector: pBluescript; The
/note="Tosgan: Organ of Corti; Vector: pBluescript; The
organ of Corti (CC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from p12 and 24 from p13. After Killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibwitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
synthesized with DNA polymerase and transcribed using
Moloney murine leukemia virus reverse transcribed with
EcoR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over pharmacia Size Sept400 (Pharmacia, Uppsala, Sweden)
and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA)
columns to enrich for cDNAs greater than 400bp and 1000 bp
respectively. The cDNA was then directionally ligated with
EcoR I and Xho I. The phagemid was packaged with Glapak
III Gold of the phage library was estimated to be 11,100,000
resistance helber and the first stranged was adopted
Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2, 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, form)
                                                                                                                                                                                                                                                                                                                                                                                                                        Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          clone="gi108g04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _type="mRNA"
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-47 (1-128) x BQ568471 (1-630)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BB611549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 ATGCCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCCGGGCATGGT 72
                                                                                                                                                                                                                         l (bases 1 to 696)

Arakawa,T., Carninci,P., Fukuda,S., Furuno,M., Hanagaki,T., Hara,A.
Arakawa,T., Carninci,P., Ishii,Y., Ito,M., Kawai,J., Konno,H., Kouda
,M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,X., Ohno,M.,
Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki
,D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H.,
Tagawa,A., Takahashi,F., Takeda,Y., Tanaka,T., Toya,T.,
Muramatsu,M. and 'Ayashizaki,Y., Tanaka,T., Toya,T.,
Muramatsu,M. and 'Ayashizaki,Y., Tanaka,T., Toya,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB611549 RIKEN full-length enriched, 13 days embr
musculus cDNA clone 3110083012 5', mRNA sequence.
                                                                                       Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                             Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BB611549.1 GI:15393547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB611549
Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
                                                                                                                                                                                Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                     RIKEN Mouse ESTs (Arakawa, T., et al. 2001)
                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThraspileAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ζı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98.44%
96.09%
96.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.76e-80
655.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        are uncharacterized ESTs and 20% are unidentified. Term 111 c \, 167 g \, 174 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        days embryo head Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 31-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                             В
                                                                                    S
                                                                                                                                    밁
                                                                                                                                                                           Ś
                                                                                                                                                                                                                       US-10-019-455A-47 (1-128) x BB611549 (1-696)
                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                   Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                            Similarity:
                                                                             21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                       24 AIGGCAAGGATATIGATICTITIGCTIGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 83
                                                                                                                                                           1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
    IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                  GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          204
```

```
Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.

Normalization and subtraction of cap-trapper selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

wagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Zawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Yamanaka, I., Kiyosawa, H., Kondo, S., Saito, T., Shinagawa, A., Aizawa, K., Fukuda, S., Hara, A., Itoh, M., Kawai, J., Shibata, K., Arakawa, T., Ishii, Y. and Hayashizaki, Y.
Mapping of 19032 mouse cDNAs on mouse chromosomes. J. Struct. Func. Genomics 2 pre, L72-L86 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. . 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Please visit our web site (http://genome.gsc.riken.go.jp) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y. and Hayashizaki,Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e mouse tissues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara
                                                                                                                                                                                                                   Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in
RIKEN. Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Site 1: XhoI; Site 2: SstI; cDNA library was
prepared and sequenced in Mouse Genome Encyclopedia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="13 days embryo"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tissue_type="head"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone="3110083012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . .696
98.44%
96.09%
96.89%
                                                                                                             5.52e-80
                                                                                   655.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       one_lib="RIKEN full-length enriched, 13 days embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _type="mRNA"
                                                                                   Length:
Matches:
                               Mismatches:
                                                      Conservative:
Indels:
```

Gaps:

Ş

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    384 ACGGATATTGACTTCTTCTGTGAA 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             204 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    474 bp mRNA linear EST 19-JUN-200: gi42g03.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi42g03 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plate: 42 row: g column: 03
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Structural Cell Biology
National Institute of Deafness and other Communication Disorders
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     {\tt EST} analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ565637.1 GI:21468954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 474)
          /dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 23721, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ng mRNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                kacharb@nidcd.nih.gov
manufacturer's instructions. Briefly: 1.5 ug mRNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10090"
/clone="gi42g03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear EST 19-JUN-2002
```

```
145 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the
                                                    Biosystems, Foster City, CA). Sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11.50 and 0.1% 51.150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
12% are uncharacterized ESTs and 20% are unidentified.
1 78 C 131 g 120 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the CDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reverse transcribed using a hybrid oligo(dT) linker-primer
```

S 덩 Ş 밁 Ş В

US-10-019-455A-47 (1-128) x BQ565637 (1-474) Query Match: Best Local Similarity: Percent Similarity: Pred. No.: Alignment Scores: 95.31% 96.15% 650.00 97.66% 1.54e-79 Indels: Mismatches: Conservative: Matches: Length:

ORIGIN

BASE COUNT

	PO CHU MUUD MA CH PROCESS EXCOCOCIO CH MUNICIPALITY
οy	1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
Д'n	14 ATGCCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 73
Q	21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
₽	74 GTATTTATGGATAAACTTTCTTCTAATAAGTTGTGCGGATGAGGAGTGTGTCTATACT 133
γΩ	41 IleSerLeuAlaArgAlaGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
DЬ	134 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 193
Qy	61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
рb	194 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCTGGAGAG 253
γO	81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
90	254 TITTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 313
Q	101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluTleProThr 120

B S

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ563768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         374 ACGGATATTGACTTCTTCTGTGAA 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCCAACC 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             684 bp mRNA linear EST 19-JUN-200.
1916609 y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone g106c09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kachar, B.
EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ563768.1 GI:21466749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 684)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301-402-1765
Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlbbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721), Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMIV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with ECONI adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp , respectively. The cDNA was then directionally ligated to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage="Post natal day 5 to 13"
/dlone lib="Mouse Organ of Corti CONA pBluescript, The
/note="Torgan of Corti, Vector: pBluescript, The
/note="Torgan of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5, 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/clone="g106c09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         column: 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 19-JUN-2002
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                      ACCESSION
                                                                                              DEFINITION
                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
              VERSION
                                                                                                                                                      BQ566932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NO...
                                                                                                                                                                                                                                         373
                                                                                                                                                                                                                                                                                                                                                         313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                                                              121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         253
                                                                                                                                                                                                                                                                                                                                                                                                           101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
  gi73g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi73g09 5', mRNA sequence.

BQ566932
BQ566932.1 GI:21470249
                                                                                                                           BQ566932
                                                                                                                                                                                                                                         ACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                   CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
```

US-10-019-455A-47 (1-128) x BQ563768 (1-684) 133 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC 61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80 21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40 41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60 73 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 13 ATGCCAGGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 194 a ECOR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XiI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96 (TW) plasmid purification kit (Invitrogen, Carlabad, CA) as instructed by the manufacturer. ESTs from CALLabet of the invitroged by the manufacturer. strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2, 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the CDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGGCTATGACC) and 25 12% are uncharacterized ESTs and 20% are unidentified."
120 c 178 g 192 t the Uni-ZAP XR vector, which had been predigested with 97.66% 95.31% 95.86% 5.01e-79 648.00 Length: Matches: Gaps: Mismatches: Conservative: Indels: 252 72 192 132

nRNA

linear

EST 19-JUN-2002

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: 73 row: g column: 09
Seg primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301-402-1765
                                                                                                              Synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligate and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XL1 Blue MRF, cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescue plasmid DNA from the phages. Upon plating of the rescue plasmid DNA from the phages. Upon plating of the rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 95 well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fastrack kit (catalog # K153-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs the 5' end of the cDNA clones were generated with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone="gi73g09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deafness and other Communication Disorders
                                                ESTs from
```

US-10-019-455A-47 (1-128) x BQ566932 (1-409) Query Match: Best Local Similarity: BASE COUNT Percent Similarity: Alignment Scores: No.: 387 CACGGCTATTGACTTCTTGT 408 207 147 TATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGT 267 GTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTT 80 aPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPh 60 40 rIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVa 87 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCTTGATGAGGAGTGTGTCTATAC 21 MetPheMetAspLysLeuSerSerLysLysLeuCysAla-AspGluGluCysValTyrTh 27 ATGCCAAGGATATTGATTCTTTTGCTTGGGGGGCCTTGCGGTTCTATGTGCCGGGCATGGT rThrAspIleAspPhePheCys 127 CCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAAC eProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProTh CAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGA lLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAl MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 102 a City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Blosystems, Foster universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% 96.09% 93.75% 92.46% 3.58e-76 625.00 Length: Matches: Gaps: Mismatches: Conservative: Indels: 386 326 100 266 60 88 206 146

ORIGIN

Score:

REFERENCE BQ565411 LOCUS COMMENT ACCESSION RESULT 12 DEFINITION KEYWORDS VERSION JOURNAL TITLE ORGANISM Contact: Kachar,B. Structural Cell Biology National Institute of Do BQ565411 490 bp mRNA linear EST 19-JUN-200. gi37b12.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi37b12 5', mRNA sequence. Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. (bases 1 to 490) EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing Unpublished Mus musculus Kachar, B. BQ565411.1 GI:21468728 Mus musculus (house mouse) Deafness and other Communication Disorders EST 19-JUN-2002

밁 Ş 밁 S 맑 S 밁 Ş 밁 Ş 밁 Ś 밁 Ś

FEATURES

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: 37 row: b column: 12
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50/4249 South Drive; NIH, Bethesda, MD 20892-8027, USA
                              191
was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament ware removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlabad, CA), according to manufacturer's instructions. Reveree transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721). Stratagene) and Uni-Zap XR vector kit (catalog # 23721). Stratagene) and Uni-Zap XR reverse transcribed using the manufacturer's instructions. Briefly: 15 ug mBNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker- primer and transcribed using pointed with the linker primer and transcribed using pointed with the presence of ligase and digested with Start the presence of ligase and digested with Start the presence of ligase and digested with Start the contained with primer and transcribed using pointed with primer and transcribed using point presence of ligase and digested with Start the contained to be 11000 bp and 1000 bp and 1000 bp and 1000 pp and 1000 bp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 pp and 1000 p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti (Cottor: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (CC) was fine dissected from a total of 386
OC as follows: 102 samples from post natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
14 from P12 and 25 from P13 to 100 from P10;
15 from P10 and P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 from P10 f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
/clone="gi37b12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type="mRNA"
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-47 (1-128) x BQ565411 (1-490)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BY232622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
Nikaido, I., Osato, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H. Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H. Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Hume, D.A., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Quackenbush, J., Schriml, L.M., Kanapin, T.A., Fletcher, C.F., Foorrest, R., E., Cousins, S., Dalla, E., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gaasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Frazer, K.S., Gaasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I. J., Jarvis, E. D., Kanai, A., Kawaji, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Kurochkin, I.V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Petrovsky, N., Pillai, R., Pontius, J.U., Qi, D., Raid, J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M.S., Teasdale, R.D., Tomita, M., Verardo, R., Wagner, L., Wahlestedt, C., Wang, Y., Watanabe, Y., Wells, C., Wilming, L.G., Wynshaw-Boris, A., Yanagisawa, M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  125 PhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    105 ValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAsp 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      339 AGTGTTTATGGGGACCACCAGGATGAAATGGGAATTGTAGGTTATTTCCCCCACCAACTTG 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   279 CAAATCTATGTTTACTCCAAGCTGGTAACAAAAACGGAGCTGGAAAGTTTTGGGCTGGC 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219 AGAGCACAGGAAAATTACAATGCCCCAAACTGTAGGTTCATCGATGTCAAAAAAAGGGCAG 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159 AAACTTTCTTCTAAAAATTGTGTGCGGATAAGGAGTGTGTCTATACTATTTCTCTGGCA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65 GlnīleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAlaGly 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99 TIGATTCTTTTGGTTTGGGGCCTTGGGGTTCTATGTGCCGGCATGGGGTATTTATGGAT 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BY232622
BY232622 RIKEN full-length enriched, adult inner ear Mus musculus CDNA Clone F930026J20 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 LeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGlyMetPheMetAsp 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAla 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTTCTGGGAA 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGAC 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeu 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGln 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 365)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.2e-72
594.00
95.97%
89.52%
87.87%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear EST 10-DEC-2002
```

```
밁
                                                               Ś
                                                                                                                                     US-10-019-455A-47 (1-128) x BY232622 (1-365)
                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci,P., Hayatsu,N., Hirozane-Kishikawa,T., Konno,H., Nakamura,M., Sakazume,N., Sato,K., Shiraki,T., Waki,K., Kawai,J., Aizawa,K., Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tissues were provided by Kirk W. Beisel (Boys Town National Research Hospital 555 North 30th Street Omaha, NE 68131 USA) whose assistance we gratefully acknowledge. Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: genome-res@gsc.riken.go.jp,

NRL:http://genome.gsc.riken.go.jp/
Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hirozane
,T., Imotani,K., Ishii,Y., Itoh,M., Kawai,J., Konno,H., Miyazaki,A.,
Murata,M., Nakamura,M., Nomura,K., Numazaki,R., Ohno,M., Sakai,K.,
Sakazume,N., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prepare mouse tissues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Yoshihide Hayashizaki
                                   MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sakazume, N., Sasaki, D., Sato, K., Shibata, K., Shiraki, T., Tagami
M., Waki, K., Watahiki, A., Muramatsu, M. and Hayashizaki, Y. Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="inner ear"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="F930026J20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
                                                                                                                                                                                              8.48e-68
564.00
97.37%
94.74%
83.43%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lib="RIKEN full-length enriched, adult inner ear" c 110 g 98 t
                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                           Matches:
```

```
RESULT 14
BQ567343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       324 CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCC 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         204 AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144 ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       84 GIATTIATGGATAAACTITCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gi88d08.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi88d08 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  National Institute of Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ567343.1 GI:21470660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAla 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTGGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTAGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 primer: M13RP1 reverse primer (ABI).
/ Sexame and temmate of the remark of the macro of Corti post natial day 5 to 13"

/ dev stage="post natial day 5 to 13"

/ clone lib="Mouse Organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector: pBluescript; The organ of Corti; Vector pBluescript; The organ of Corti; Vector pBluescript; The organ of Corti (CC) was fine per stall of 102 samples from post-natal (P) day 5; 72

from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P910;

14 from P12 and 24 from P13. After killing animals by cervical dislocation followed by decapitation, The bulla was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                type="mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
```

```
US-10-019-455A-47 (1-128) x BQ567343 (1-604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
       241
                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                 89
                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Н
                                                           ArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LysLysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArgAlaGlnGlu
CGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGACTTCTTCTGTGAA 300
                                                                                                                                                      GACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTTGGTGAAGGAGCAG
                                                                                                                                                                                                                         AspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuValArgGluGln 108
                                                                                                                                                                                                                                                                                                        TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAAGTTTTTGGGCTGGCAGTGTTTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrVal 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAA
                                                                                                                                                                                                                                                                                                                                                                            TyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAlaGlySerValTyrGly 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF, cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGANACAGCTATCACC) and 25% etrenott Bigny to the manufacturer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA).

The frequency distribution of the library is as follows: 72% of genes have l copy; 14.3% 2, 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(df) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthesized with DNA polymerase and RNase H. Complementar DNA was blunt ended with Pfu DNA polymerase, ligated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.51e-62
525.00
99.00%
97.00%
77.66%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Complementary
                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48
```

á 멍 Ş 밁 Ś

RESULT

Ş

В

Š

Pred. No.:

BASE COUNT ORIGIN

В

```
LOCUS
DEFINITION
ACCESSION
                                         밁
                                                                                 Ś
                                                                                                                               밁
                                                                                                                                                                Ş
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                        S
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE236443
                                                                                                                                                                                                                                                                                               US-10-019-455A-47 (1-128) x BE236443 (1-527)
                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                           155
                                                                                                                               95
61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                   41
                                                                                                                                                                                                              35
                                                                                                                                                                  21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 527)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G. Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE236443 527 bp mRNA linear 144645 MARC 4BOV Bos taurus cDNA 5', mRNA sequence. BE236443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: 54 row: C column: 18
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Single pass sequencing. Bases called and alt trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore and _minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BACKWARD: GITTTCCCAGTCACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USDA, ARS, US Meat Animal Research Center PO Box 166, Clay Center, NE 68933-0166, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11282978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE236443.1 GI:9021161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCR PRimers
                                                                                                                                                                                                                                      MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                                                                            IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                             ATATTTATGGACAGACTTGGTTCCAAGAAGCTGTGTGCAGATGATGAATGTGTCTATACT
                                                                                                                                                                                                              ATGGCAAGATTGGTGTTACTTTTCCTCCCAGGTCTTGTGGCCATATGTGCTGTGCATGGA 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    173 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="MARC 4BOV"
/note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
Library made from pooled tissue from day 20 and day 40
embryos."
126 g 134 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:9913"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Bos taurus"
(mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                             82.95%
74.42%
73.37%
                                                                                                                                                                                                                                                                                                                                                                                                                          3.83e-58
496.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                         527
96
11
8
14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                         214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>۾</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18
```

Search completed: December 29, 2003, 22:00:52 Job time: 1326.28 secs

```
Command line parameters:

-MODEL-frame+ p2n.model -DEV=xlh
-O=/Ggn2_1/USPTO_spool/US10019455/runat_29122003_160347_230/app_query.fasta_1.1770
-DB=N Geneseq_19Jun03 -OFMT=fastap -SUFFIX=rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15
-MODE=LOCAL -OUTPMT=pto -NORM=ext -HEAPS1ZE=500 -MINLEN=0 -MAXLEN=200000000
-USEF=US10019455_@CGN 1 1 0 @runat_2912203 160347_230 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DSV TIMEOUT=120 -MARN TIMEOUT=30 -THREADS=1 -XGAPEXT=0.5 -FGAPOP=6
-DSV TIMEOUT=120 -THREADS=1 -XGAPEXT=0.5 -FGAPOP=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic search, using frame_plus_p2n model
                N Geneseq 19Jun03:*

1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                December 29, 2003, 16:10:49; Search time 154.353 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2552756 seqs, 1349719017 residues
SIDS1/gcgdata/geneseq/geneseqn-embl/NA198.DAT:*

0: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA198.DAT:*

0: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA198.DAT:*

2: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

2: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

3: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

3: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

5: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

6: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

7: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

9: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

9: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

9: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*

10: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA200.DAT:*

11: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*

12: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*

13: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*

14: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*

15: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*

16: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MARILILLIGGLVALCAGHG.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (without alignments)
2238.558 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5105512
```

Pred. No. greater is the number of results predicted by chance to have a ater than or equal to the score of the result being prime printed,

and is derived by analysis of the total score distribution.

SUMMARIES

Result იი വ ŏ. $\begin{smallmatrix} 1 & 1 & 5 \\ 1 & 5 & 5 \\ 1$ 275.5 275.5 275.5 265.5 265.5 264.5 222.5 222.5 Score Query Match 100 40.8 80 77 67 84 40 40 Length 1201 330 330 330 330 307 261 459 459 433 DΒ IJ AAQ84061 ABV59229 ABL63602 ABL64012 AAQ84050 AAI70083 AAH26343 AAF59099 AAH26342 AAF59083 AAF59098 AAF59068 ABX75821 ABX77026 AAH2634: AAS17583 AAF59084 ABX78808 ABX98024 ABX98935 ABX98433 ABL88249 ABL95738 ABS74460 AAF92140 AAQ84052 AAH47783 AAD18732 AAF59092 AAF59093 AAF59079 AAF59080 AAH98228 ABK33571 ABL8825 ABL95740 Amplified fragment Human PRO19670 cDN Human cDNA encodin Human angiogenesis Human PRO19670 cDN Description CDNA Human prostate exp Sequence encoding Melanoma inhibitor Human antisense ol Human growth regul Rat MLP nucleotide CDNA encoding huma Human EST-derived Human secreted/tra Human PRO polynucl Human PRO polynucl Human cDNA encodin Novel human secret Sequence encoding Breast cancer rela Breast cancer rela Recombinant human Sequence encoding Rat MLP nucleotide Mouse MLP nucleoti Human MLP nucleoti Human growth regul Human MLP nucleoti Human angiogenesis Human PRO9873 cDNA DNA encoding novel Human growth regul duman cDNA encodin cDNA encoding huma Novel human secret Human PRO19670 cDN Human MLP nucleot: Mouse MLP nucleot: Rat MLP nucleotide **fouse** encoding huma cDNA encoding

ALIGNMENTS

× 8 ×	22	₹	₹	×	DE	ኟ	Ş	Ķ	AC	Ķ	ä	AAR	;
Rattus sp.	<pre>cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.</pre>	joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;	MLP; MIA; melanoma inhibitory activity; cancer; bone disease;		Rat MLP nucleotide sequence SEO ID NO:46.		23-APR-2001 (first entry)		AAF59098;		AAF59098 standard; DNA; 384 BP.	AAF59098	

```
Alignment
Pred. No.:
                                                                                       Ś
                                                                                                                          밁
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                         S
                                                          밁
                                                                                                                                                      Ş
                                                                                                                                                                                      망
                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-47 (1-128) x AAF59098 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 384 BP; 98 A; 72 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 13; Page 105-106; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAB69130.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itch Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in the exemplification of the present invention.
                                                            301
                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-159271/16
                            121
                                                                                                                                                                                         181
                                                                                                                                                                                                                                                       121
                                                                                                                                                          8
                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nishi K,
                                                            CCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACC 360
                                                                                  ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                          TTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGTTATTTC 300
                                                                                                                                                                                         AAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGGCA 240
                                                                                                                                                                                                              LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                       ATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTC
                                                                                                                                                                                                                                                                                                                                               MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                   MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly 20
                          ThraspIleaspPhePheCysGlu 128
                                                                                                                                                PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                               IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                       ATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACC
                                                                                                                                                                                                                                                                                                                                                                                       ATGGCAAGAATATTGATTCTTTTGCTTGGGGGGCCTTGTGGCTCTGTGCCGGGCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.1e-84
676.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109 G; 105 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     384
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               joint
                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                       60
```

RESULT

Ş

19

LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla

```
멼
                                                            밁
                                                                                        Ş
                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                   US-10-019-455A-47 (1-128) x AAF59068 (1-384)
                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF59068 standard; DNA; 384 BP.
                                                                                                                                                                                                                                                                                                                                                                                    DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB6912 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                            Sequence 384 BP; 98 A; 68 C; 111 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 11; Page 93; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MLP; MIA; melanoma inhibitory activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-APR-2001
                                                                                                                                                                                                                                                                                                ŏ
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes novel MLP proteins and their encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; AAB69125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouse MLP nucleotide sequence SEQ ID NO:10
 121
                                                           61 GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT
                                                                                21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                         Ь
                                                                                                                                                                                                                                                                                                                                                                         exemplification of the present invention.
ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC
                      IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                         ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT
                                                                                                                                                     MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99JP-0186718
                                                                                                                                                                                                                  655.00
98.44%
96.09%
96.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ogi K,
                                                                                                                                                                                                                                                                                               9.27e-82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ohkubo S,
                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer; bone disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Noguchi Y,
                                                                                                                                                                                                                1123
0 2 3 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              joint
                                                            120
180
                              60
                                                                                         40
                                                                                                                        60
```

```
Best Local S. Query Match: DB:
                                                                                                                                                                                                                             ARESULT 3
AAP5908
XX AAP5908
XX AAP5908
XX AAP5908
XX AAP5908
XX MILP,
XX MILP,
XX MILP,
XX MILP,
XX MILP,
XX MO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN WO20
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
PN GOAT
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MUS
XX MU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                Percent Similarity:
                                                                                                              Score:
                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    믕
                                                     Local Similarity:
                                                                                                                                                                                                                                                                                                           The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69127 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                             Sequence 947 BP; 279 A; 158 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; Page 100-101; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse MLP nucleotide sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF59084 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                      exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGTTATTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-0186718
3.37e-81
655.00
98.44%
96.09%
96.89%
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΒP
                                                                                                                                                                                                                                221 G; 289 T; 0 other;
                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ູດ
                                                                                Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID NO:30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Noguchi
                                                                                                           947
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
```

```
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-47 (1-128) x AAF59084 (1-947)
                                                                                      Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                 MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                             WPI; 2001-159271/16.
P-PSDB; AAB69123.
                                                Example 1; Page 91; 111pp; Japanese.
                                                                                                                                                                                                 Itoh Y,
                                                                                                                                                                                                                                                      30-JUN-1999;
                                                                                                                                                                                                                                                                                29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human MLP nucleotide sequence SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF59065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF59065 standard;
                                                                                                                                                                                                                                                                                                                                    WO200102564-A1
                                                                                                                                                                                                                            (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                 Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    {\tt ATGGCAAGGATATTGATTCTTTTGCTTGGGGGCCTTGTGGTTCTATGTGCCGGGCATGGT}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                      99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA;
                                                                                                                                                                                                Ogi K,
                                                                                                                                                                                                 Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                 ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128
                                                                                                                                                                                               Mogi S,
                                                                                                                                                                                                Noguchi Y,
                                                                                                                                                                                                 Yoshimura
                                                                                         joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
```

The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinfiammatory and cardiant activities, and can be used in gene therapy and as secretory cell

```
RESULT 5
AASI,7583
ID AASI
XX AASI
XX AASI
XX AASI
XX AASI
XX DNA
XX DNA
XX Seci
DNA
XX Seci
NW Ant.
XW hume
XW haer
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
XW hume
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ពួកក្រកួន ន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-47 (1-128) x AAF59065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                       Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease; respiratory disease; renal; gastrointestinal; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 384 BP; 99 A; 70 C; 106 G; 109 T; 0 other;
                                                         WO200179454-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAS17583 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                novel secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                   /product= "Human secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.28e-74
600.00
93.75%
86.72%
88.76%
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 384
111
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                Ş
                                                                                                                        g
                                                                                                                                                            Ş
                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-47 (1-128) x AAS17583 (1-387)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to an isolated novel secreted polypeptide (I) and polynucleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, neurological and psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, or gastrointestinal diseases. These may also be used to treat diseases, or gastrointestinal diseases. These may also be used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treat diseases, abnormalities and disorders caused by abnormal expression, production, function and/or metabolism of the genes, as vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mENA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polypucleotides and to identify membrane-bound or soluble receptors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 387 BP; 101 A; 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 2; Page 44; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Agarwal P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (SMIK)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-APR-2000; 2000US-196603P.
24-APR-2000; 2000US-199417P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-APR-2001; 2001WO-US11797
          101
                                                                                                                          181
                                                                                                                                                                                                  121
                                                                                  81
                                                                                                                                                              61
                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  used as diagnostic reagents, in chromosome localisation studies tissue expression studies. The present sequence represents the sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMITHKLINE BEECHAM CORP. SMITHKLINE BEECHAM PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU09871
ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                    PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                  LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                  ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                            IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                MetPheMetAspLysLeuSerSerLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                  MetAlaArgIleLeuIleLeuLeuClyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                            ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                              TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGGAGTCGTGGGTTATTTC
                                                                                                                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.33e-74
600.00
93.75%
86.72%
88.76%
24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rizvi SK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106 G; 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in chromosome localisation studies,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
111
9
8
0
```

301

240 90

300

60

```
RESULT 6
AAH26341
                                                                                                                              밁
                                                                                                                                                                                                                                       flanking the inserts, sequencing by hybridisation sequences signature analysis, and Sanger sequencing techniques. This expressed sequence tag was used in the assembly of a full-length CDNA sequence (see AAH26343) encoding a novel human growth regulatory-like polypeptide (GRLP, see AAB82671). The GRLP belongs to the same protein family as growth regulatory proteins, comparison (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (GP-AAP, 44% identity and 64% retinoic acid sensitive protein (GP-AAP, 44% identity and 64% retinoic acid sensitive protein (GP-AAP, 44% identity and 64% retinoic acid sensitive protein (GP-AAP, 44% identity and 64% retinoic acid sensitive proteins. GRLP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) cand diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as griwmers. The polypucleotides can also be used to design probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                           Sequence 426 BP;
                                                                                                                                                                       and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme peptide-nucleic acid molecules, and to produce transgenic animal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, and nervous system hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human growth regulatory-like polypeptide clone 16372272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence is that of Hyseq clone identification number 16372272, which was obtained from a human thymus cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-483233/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAH26341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAH26341 standard; cDNA; 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                using standard PCR with primers specific for vector sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 114; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drmanac RT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mize NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0491404
2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                              119 A; 73 C; 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        384
                                                                                                                              G; 120 T; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                            antisense, ribozyme and uce transgenic animals.
                                                                                                                              other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nta
RESULT 7
ABL95740
ID ABL9
XX ABL9
XX ABL9
XX ABL9
XX Huma
XX Huma
XX Huma
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
```

Score:

4.96e-74 600.00 93.75%

Matches: Conservative:

426 111 9

Alignment Scores: Pred. No.: Percent Similarity:

```
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-47 (1-128) x AAH26341 (1-426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                          15-SEP-2000;
18-SEP-2000;
18-SEP-2000;
24-OCT-2000;
08-NOV-2000;
                                                                                                                                                    23-AUG-2000;
24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                20-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
28-JUL-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder;
                                                                                                                                                                                                                                                                                                                                                                       09-JUL-2001; 2001WO-US21735
                                                                                                                                                                                                                                                                                                                                                                                                                 31-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antiarteriosclerotic; gene; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human angiogenesis related cDNA PRO9873 SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABL95740 standard; cDNA; 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 ThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     199 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379 ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
2000US-230978P.
2000US-00000P.
2000US-0664610.
2000US-0665350.
2000US-242922P.
2000US-270923P.
2000US-232952.
2000WO-US30953.
                                                                                                                                                                        2000WO-US23522.
2000WO-US23328.
                                                                                                                                                                                                                  2000US-222695P.
2000US-0643657.
                                                                                                                                                                                                                                                               2000US-220664P
2000WO-US20710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                138
```

```
Best Local Si
Query Match:
DB:
                                                                                                   Pred.
                                     Percent Similarity:
                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-DEC-2000; 2000WO-US32678.
20-DEC-2000; 2000WS-0747259.
20-DEC-2000; 2000WS-0767699.
22-JAN-2001; 2001WS-076698.
28-FEB-2001; 2001WS-0796498.
28-FEB-2001; 2001WS-0802706.
01-MAR-2001; 2001US-0802706.
14-MAR-2001; 2001US-0802706.
14-MAR-2001; 2001US-0802706.
14-MAR-2001; 2001US-0802706.
10-MAY-2001; 2001US-0854208.
25-MAY-2001; 2001US-0854208.
25-MAY-2001; 2001US-0854208.
25-MAY-2001; 2001US-0854208.
25-MAY-2001; 2001US-0854208.
25-MAY-2001; 2001US-0854208.
25-MAY-2001; 2001US-0854208.
25-MAY-2001; 2001US-0866028.
25-MAY-2001; 2001US-085420.
30-MAY-2001; 2001US-08502.
31-JUN-2001; 2001US-0870574.
31-JUN-2001; 2001WO-US17802.
28-JUN-2001; 2001WO-US17802.
28-JUN-2001; 2001WO-US17802.
                                                                                                                     atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a coding sequence of the invention.
                                                                                                                                                                        The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or disposing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration,
                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                                                                                                                                     Baker KP, Ferrara N, Gen
Godowski PJ, Gurney AL,
Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                   (GERB/)
(GORD/)
(GODO/)
(GODO/)
(GURN/)
(HILL/)
(MARS/)
(PAON/)
(STEP/)
(WATA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GETH )
(BAKE/)
(FERR/)
                                                                                                                                                                                                                                       Claim 1; Fig 359; 567pp; English.
                                                                                                                                                                                                                                                                infarction),
                                                                NO
O
                                                                                                                                                                                                                                                                                                                                                                                                        (WOOD/)
                                                                                                                                                                                                                                                                hundred and eighty seven nucleic acids encoding PRO polypeptides, ful in diagnosis and treatment of cardiovascular (e.g. myocardial arction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                2002-171999/22.
                        Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GERRITSEN M E.
GODDARD A.
GODDWSKI P J.
GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                                                                                                                                                                                                                        PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
WOOD W I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENENTECH
BAKER K P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FERRARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAN
                                                                                                   521
                                                                                                   ВP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        z v
                                                                                                   167
6.62e-74
600.00
93.75%
86.72%
88.76%
                                                                                                   A; 86 C;
                                                                                                                                                                                                                                                                                                                                                        Gerber H, Gerrit
L, Hillan KJ, Ma
CK, Williams PM,
                                                                                                   131 G; 137 T; 0
           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                Gerritsen ME,
                                                                                                                                                                                                                                                                                                                                                         Marsters SA, Pa
M, Wood WI, Ye
                                                                                                    other;
                                                                                                                                                                                                                                                                                                                                                                                  Goddard A;
  521
111
9
8
0
                                                                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                                    ۲,
                                                                                                                                                                                                                                                                                                                                                                        Paoni NF;
```

US-17-019-455A-47

(1-128)

x ABL95740

```
ABLU88251
XX
ABLUXX
ABLUXX
AC ABLUXX
XX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABLUXX
AC ABL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
23 -JUN-2000;

20 -JUL-2000;

25 -JUL-2000;

25 -JUL-2000;

28 -JUL-2000;

28 -JUL-2000;

17 -AUG-2000;

17 -AUG-2000;

18 -SEP-2000;

18 -SEP-2000;

18 -SEP-2000;

18 -NOV-2000;

10 -NOV-2000;

11 -DEC-2000;

11 -DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophlebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human PRO9873 cDNA sequence SEQ ID NO:359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABL88251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABL88251 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             healing; chromosome mapping; gene mapping; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LystysGlyGlnGlnIleTyrValTyrSerLysteuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
  2000WO-US23522
2000WO-US23328
2000US-230978P
2000US-0664610
2000US-0665350
2000US-079235
2000WO-US30952
2000WO-US30952
2000WO-US30952
2000WO-US30952
                                                                                                                                                                                                                                                                      ; 2000US-213637P.
; 2000US-219556P.
; 2000US-2206624P.
; 2000US-220664P.
; 2000WO-US20710.
; 2000US-222695P.
; 2000US-0643657.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US19692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          157
```

```
Ś
                                                                                                                      Ś
                                                                                                                                                        밁
S
                                В
                                                                                           皮
                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-47 (1-128) x ABL88251 (1-521)
                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                 CC ABB85003 The PRO proteins and polynucleotides have cardiant, cytostatic, cantiangiogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polynucleotides, proteins, agonists and antagonists are useful for treating or diagnosing c a cardiovascular, endothelial or angiogenic disorder in a mammal, ce.g. cardiac hypertrophy, trauma, cancer, age-related macular cheeresclerosis, hypertension, arterial restensis, creating arthritis, angina, myocardial infarctions, thrombophlebitis, creational arthritis, angina, myocardial infarctions, thrombophlebitis, carcinomal and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABL88259 to ABL8867 represent primers and composes used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2001;
09-MAR-2001;
11-MAR-2001;
22-MAR-2001;
05-APR-2001;
10-MAY-2001;
10-MAY-2001;
25-MAY-2001;
25-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski PJ, Gurney AL,
Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or anglogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                           Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-DEC-2000;
22-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-090516/12.
                                158
 13
                                                            41
                                                                                            86
                                                                                                                         21
                                                                                                                                                        38
 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                            MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                        MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fig 359; 565pp; English.
                                                   IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                           ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT 157
                                                                                                                                                        ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA
                                ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ferrara N, G
J, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001WO-USO6666
2001US-0802706
2001US-0808689
2001US-0816744
2001US-0828366
2001US-0854208
2001US-0866280
2001US-0866034
2001US-0866034
2001US-0870574
2001WO-US17992
2001WO-US17443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001US-0796498.
2001WO-US06520.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000WO-US34956.
2001US-0767609.
                                                                                                                                                                                                                                                              6.62e-74
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gerber H, Gerritsen ME, Goddard
L, Hillan KJ, Marsters SA, Pan o
CK, Williams PM, Wood WI, Ye W;
                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard A;
                                                                                                                                                                                                                                                   521
111
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NF;
 80
                                                                                                                         40
                                                            60
                                                                                                                                                        97
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                       28-NOV-2000;
01-DEC-2000;
20-DEC-2000;
                                                                                                                                                                                                                                                    25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                             28-JUL-2000;
23-AUG-2000;
24-AUG-2000;
15-SEP-2000;
                                                                                  Baker KP, Do
Grimaldi JC,
                                                                                                                                                                                                                                                                                                                                                                                                                              Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation; tumour necrosis factor-alpha; gene; ss.
                                                                                                                                                                                                                                                                                                                      20-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABK33571 standard; cDNA;
                                                        P-PSDB; AAU83627.
                                                                                                                                                                                                     10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                    29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                          WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA encoding human PRO protein,
                                                                                                                                                      28-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                               (GETH ) GENENTECH INC.
                                                                2002-172001/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  398 ACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                            Desnoyers
                                                                                                                                                                       2000WO-US23328.
2000US-000000P.
2000WO-US30873.
2000US-253646P.
2000WO-US32678.
2000US-0747259.
                                                                                                                                                                                                                                2000US-220638P.
2000US-220664P.
2000US-220666P.
2000US-220893P.
2000WO-US20710.
2000WO-US23522.
                                                                                                                                                                                                                                                                                          2000US-220605P.
2000US-220607P.
2000US-220624P.
                                                                                                                                                     2000WO-US34956
2001WO-US06520
                                                                                                                                                                                                                                                                                                                                                    2001WO-US21066
                                                                                                                                   2001US-0854280
2001WO-US17092
                                                                                                                                                                                                                                                                                                                      2000US-219556P.
2000US-220585P.
                                                                                   Gurney
                                                                                   ¥£
                                                                                 Gerritsen ME, Goddard
Smith V, Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seq ID No 71.
                                                                          Goddard A, Gouden TF. Watanabe CK,
                                                                             Godowski PJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337
```

One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour.

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                  RESULT 10
AAH98228
   Ś
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-47 (1-128) x ABK33571 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to one hundred and twenty two nucleic acids commoding PRO polypeptides. The sequences of the 122 PRO polynucleotides acroade human secreted proteins. The PRO nucleic acids, polypeptides, cagonists and antagonists are useful for treating a PRO related disorder. CC cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or cliver tumour. The PRO polypeptides are useful for stimulating the coliferation of, or gene expression, in pericyte cells, for stimulating the proliferation or differentiation of chondrocyte cells, for stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal cc fibroblast cells. The PRO polypeptide may also be used as molecular capplications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABK33536-ABK33657 represent human cross and colding sequences of the invention.
Human; sheep; pig; cow; fruit fly; yeast; hamster; macaque; horse; tomato; monkey; dog; sea urchin; expressed sequence tag; EST; diagnostics; forensic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition; ss.
                                                                                        Human EST-derived coding sequence SEQ ID NO: 85.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 521 BP; 167 A; 86 C;
                                                                                                                             12-OCT-2001
                                                                                                                                                                                                   AAH98228 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                        398 ACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Figure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₩
80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                             CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                    ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                         PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGCCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71; 359pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.62e-74
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       521
111
9
8
0
                                                                                                                                                                                                                                                                                                                                                                                                                     337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                             397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
```

```
당
                                                                             Ś
                                                                                                          片
                                                                                                                                   Ş
                                                                                                                                                              밁
                                                                                                                                                                                       Ś
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-47 (1-128) x AAH98228 (1-891)
                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention provides the protein and coding sequences of novel proteins from a variety of organisms, including human, dog, cat, horse, cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (ESTs) from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess biodiversity and for nutritional purposes. The present sequence is a cDNA of the control of mutations and for nutritional purposes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JAN-2000; 2000US-0491404.
17-JUL-2000; 2000US-0617746.
03-AUG-2000; 2000US-0631451.
15-SEP-2000; 2000US-0663870.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 891 BP; 272 A; 146 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 236; 1275pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated polypeptide for treatment of diseases, antibodies and research use -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-476164/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200154477-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAM23569.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cao Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2001; 2001WO-US02687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HYSE-) HYSEQ INC
 319
                                                       259
                                                                                                          199
                                                                                                                                                               139
                                                                              81
                                                                                                                                    61
                                                                                                                                                                                         41
                                                                                                                                                                                                                     79
                                                                                                                                                                                                                                     21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                          19 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Liu C, ZI
Drmanac RA,
                                                                                                                            LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                               ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                               IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                     ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                          MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
              ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                          PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                          AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                    TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhou r,
Zhang
                                                                                                                                                                                                                                                                                                                                                       1.43e-73
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qian XB,
J, Werhr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Werhman
                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>۾</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Η.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diagnostics,
                                                                                                                                                                                                                                                                                                                                                             0069
                                                                                                                                                                                                                                                                                                                                                                                                                  891
111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Asundi V;
                         120
                                                                               100
                                                                                                          258
                                                                                                                                    80
378
                                                                                                                                                               198
                                                                                                                                                                                         60
                                                                                                                                                                                                                     138
                                                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                       20
```

78

S

121

ThrAspIleAspPhePheCysGlu 128

```
RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                              The present sequence is that of a novel nucleic acid that was assembled from human thymus cDNA library-derived Hyseq clone identification number 1637272 (see AAH26341). A recursive algorithm was used to extend the clone by pulling additional sequences from different databases. A full-length sequence (see AAH26343) encoding novel human growth regulatory-like polypeptide (GRLP, see AAB2671) was subsequently obtained. Human GRLP belongs to the same protein family as growth regulatory protein growth factors, human melanoma derived growth regulatory protein or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polymacleotides of the invention can be accepted to the complete of the invention.
                                                                                                                                                     can be used in the prophylaxis, treatment (including gene therapy) and dispussis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                        Sequence 891 BP; 272 A; 146 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2000; 2000US-0491404.
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human growth regulatory-like polypeptide partial cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAH26342 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Page 115; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-483233/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
1.43e-73
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JE,
                                                                                                                         214 G; 259 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     402
                Conservative: Mismatches:
                                                                                                                           0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Liu
```

```
RESULT 12
AAF59083
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-47 (1-128) x AAH26342 (1-891)
                                                                         Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                              MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
                                                                                                                                WPI; 2001-159271/16.
                                                                                                                                                                                                                             30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Human MLP nucleotide sequence SEQ ID NO:29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59083;
                                    Example 1; Page 99-100; 111pp; Japanese.
                                                                                                                                                                       Itoh Y,
                                                                                                                                                                                                                                                       29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                  11-JAN-2001.
                                                                                                                                                                                                                                                                                                           WO200102564-A1
                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF59083 standard; DNA; 923
                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                       Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ThraspileAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                             99JP-0186718
                                                                                                                                                                     ogi K,
                                                                                                                                                                       Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                       Mogi s,
                                                                                                                                                                       Noguchi Y,
                                                                                                                                                                        Yoshimura K;
                                                                            joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198
```

The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant

```
ភិនិនិនិនិន្តិនិន្តិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
Pred. No.:
Score:
RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-47 (1-128) x AAF59083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                AAH26343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AFF9063 to AAF59099 and AAB59122 to AAB59132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 923 BP;
                                                    mat_peptide
                                                                                sig_peptide
                                                                                                                                                                                                 Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                          Human growth regulatory-like polypeptide cDNA.
                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                          02-OCT-2001
                                                                                                                                                                                                                                                                                                      AAH26343;
                                                                                                                                                                                                                                                                                                                                 AAH26343 standard; cDNA; 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  214
                                                                                                                                                                                                                                                                                                                                                                                          394
                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACGGATATTGACTTCTTCTGCGAG 417
                                                                                                                                                                                                                                                                                                                                                                                                         ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                          (first entry)
                                                                                /*tag= a
33..101
                                                        /*tag=
102..41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303 A; 147 C; 213 G; 260 T; 0 other;
                                         /*tag=
                                                                                                              33..419
                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.5e-73
600.00
93.75%
86.72%
88.76%
                                                       ..416
                                                                      р
                                           ი
                                                                                                                                                                                                                                                                                                                                   98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-923)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93
```

WO200155332-A2

밁

21 ω_{ω}

MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr

ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly

92 20 US-10-019-455A-47 (1-128) x AAH26343 (1-1201)

Gaps: Indels:

Query Match:

```
Percent Similarity:
                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                using software programs to pull additional sequences from Hyseq's countries and by gel sequencing using primers to extend both 5' and 3' ends. The predicted protein has a mol.wt. of 14 kDa unglycosylated. GRLP belongs to the same protein family as growth regulatory protein. GRLP growth factors, human melanoma derived growth regulatory protein. Greenth factors, human melanoma derived growth regulatory protein. Greenth factors aimilarity and 45% identity over 11 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell
                                                                                                                                                                                                                          gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and peptide-nucleic acid molecules, and to produce transgenic animals. They may also have cytokine and cell proliferation or differentiation activity, stem cell growth factor activity, haematopoissis regulating activity, tissue growth activity, immunosuppressive or immunostimulant activity, activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, use in cancer diagnosis and therapy, drug screening, receptor/ligand activity, antiinflammatory activity, and treatment of leukaemia, nervous system disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is that of a novel nucleic acid encoding human growth regulatory-like polypeptide (GRLP, see AAB82671). The sequence was assembled using human thymus cDNA library-derived Hyseq clone identification number 16372272 (see AAH26341) as seed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous syst
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-AUG-2001.
                                                                                                                                                                  Sequence 1201 BP; 357 A; 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-483233/52.
P-PSDB; AAB82671.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2000; 2000US-0491404.
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                             arthritis and inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   growth and tumours, including neuroectodermal tumours such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 115-116; 119pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mize NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC
                                      Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Boyle BJ,
600.00
93.75%
86.72%
88.76%
                                                                                                     2.19e-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ford JE,
                                                                                                                                                                    C; 275 G; 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arterburn MC,
                                         Mismatches:
                                                            Conservative:
                                                                                                                                                                    T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tang YT,
111
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu C;
                                                                                                                                                                                                                                                                                                                                                                                                                             and
```

```
RESULT 14
AAF59099
ID AAF59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
밁
                                      The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                   Safe, low-toxicity secretory cell function-regulatory protein encoded DNA, applicable as drugs, in diagnosis and development
                                                                                                                                                            Claim 12; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rat MLP nucleotide sequence SEQ ID NO:48.
                                                                                                                                                                                                       promoters and inhibitors for preventing
                                                                                                                                                                                                                                                                 P-PSDB; AAB69131.
                                                                                                                                                                                                                                                                                                            Tanaka H;
                                                                                                                                                                                                                                                                                                                           Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                     30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF59099
                            in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitor;
                                                                                                                                                                                                                                                                                                                                                        (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93
                                                                                                                                                                                                                                                                                                                           Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAÄÄTGGÄĞCTGGAGAA</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                     99JP-0186718
                                                                                                                                                                                                                                                                                                                           ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                            Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            416
                                                                                                                                                                                                                                                                                                                           ζ,
                                                                                                                                                                                                                                                                                                                           Mogi
                                                                                                                                                                                                       or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                           Noguchi
                                                                                                                                                                                                                                                                                                                           Ķ
                                                                                                                                                                                                                                                                                                                            Yoshimura
                                                                                                                                                                                                                        9
                                                                                                                                                                                                         joint
                                                                                                                                                                                                                                                                                                                           <u>۲</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
```

Sequence 330 BP; 91 A; 62 C; 91 G; 86 T; 0 other;

Claim 10;

Page

98;

111pp; Japanese

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-47 (1-128) x AAF59099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
                                           Safe, low-tonencoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity:
                               Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                              joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                         23-APR-2001
                      diseases
                                                                                              WPI:
                                                                                                                                                                                30-JUN-1999;
                                                                                                                                                                                                      29-JUN-2000;
                                                                                                                                                                                                                              11-JAN-2001.
                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                        MLP; MIA; melanoma inhibitory activity; cancer; bone disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF59080 standard; DNA; 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                Itoh Y,
                                                                                                                                                        (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                      WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                Mouse MLP nucleotide sequence SEQ ID NO:25
                                                                                 2001-159271/16.
DB; AAB69127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 CCAACCACGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 GGGGCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ш
                                                                                                                               Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProThrThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                       2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.19e-73
591.00
100.00%
100.00%
87.43%
                                                                                                                               ogi K,
                                                                                                                                Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                          ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                               ς,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128
                                                                                                                                Ś
                                                                                                                               Noguchi
                                                                                                                                Ķ
                                                                                                                                Yoshimura
                                  joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
```

```
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *666666688
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-47 (1-128) x AAF59080 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores: Pred. No.:
밁
                               S
                                                                     D,
                                                                                                   Ş
                                                                                                                                           B
                                                                                                                                                                             á
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 330 BP; 91 A; 60 C; 92 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in the exemplification of the present invention.
                                                                   241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 300
                                                                                                                                             181 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 240
 301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                      119 ProThrThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                      121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                               79 G1YAlaPheTrpAlaG1YSerValTyrG1YAspHisG1nAspG1uMetG1YIleValG1Y 98
                                                                                                                                                                                                                                         59 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 78
                                                                                                                                                                                                                                                                                          61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                              39 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 58
                                                                                            TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.45e-70
574.00
99.09%
96.36%
84.91%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106
106
0
```

Search completed: December 29, 2003, 16:41:14 Job time : 157.353 secs

```
Command line parameters:

-MODEL-frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO_spool/US10019455/runat_29122003_160349_366/app_query.fasta_1.1770
-Q=-ycgn2 1/USPTO_spool/US10019455/runat_29122003_160349_366/app_query.fasta_1.1770
-DB=Published_Applications_NA -QFMT=fastap -SUFFIX=rnpb -MINMATCH=0.1
-LOOPECH=0 -LOOPEXT=0 -UNITS=blits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pcr -THR MAX=100
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pcr -THR MAX=100
-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSTZE=500 -MINLEN=0
-MAXIN=2000000000 -USER=US10019455 @CGN 1 1 412 @runat_29122003 160349_366
-MAXIN=2000000000 -USER=US10019455 @CGN 1 1 412 @runat_29122003 160349_366
-NCPU=6 -ICPU=3 -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG -DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGĀPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          옻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein - nucleic search, using frame_plus_p2n model
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xgapop 10.0,
Ygapop 10.0,
Fgapop 6.0,
Delop 6.0,
                                                                                                                     BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 December 29, 2003, 19:57:30 ; Search time 287.193 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2244575 segs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MARILILLGGLVALCAGHG......RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Published_Applications_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                          /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
                                                                                                            / Cgm2 6/ptodata/2/pubpna/US09B PUBCOMB.seq:*
/cgm2 6/ptodata/2/pubpna/US09C PUBCOMB.seq:*
/cgm2 6/ptodata/2/pubpna/US09 NEW PUB.seq:*
/cgm2 6/ptodata/2/pubpna/US09 NEW PUB.seq:*
/cgm2 6/ptodata/2/pubpna/US10A PUBCOMB.seq:*
/cgm2 6/ptodata/2/pubpna/US10B PUBCOMB.seq:*
/cgm2 6/ptodata/2/pubpna/US10B PUBCOMB.seq:*
/cgm2 6/ptodata/2/pubpna/US10B PUBCOMB.seq:*
/cgm2 6/ptodata/2/pubpna/US10 NEW PUB.seq:*
/cgm2 6/ptodata/2/pubpna/US10 NEW PUB.seq:*
/cgm2 6/ptodata/2/pubpna/US10 NEW PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (without alignments)
1527.048 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4489150
```

```
US-10-216-038-1
US-10-218-163-71
US-10-219-063-71
US-10-219-068-71
US-10-219-068-71
US-10-219-069-71
US-10-219-075-71
US-10-219-075-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
US-10-219-073-71
Sequence 1, Appli
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
```

US-10-216-038-1

GENERAL INFORMATION:

Sequence 1, Application US/10216038 Publication No. US20030124573A1

APPLICANT: Mize, Nancy K
APPLICANT: Boyle, Bryan J
APPLICANT: Ford, John E
APPLICANT: Arterburn, Matth
APPLICANT: Tang, Y Tom
APPLICANT: Liu, Chenghua

Arterburn, Matthew

a

```
APPLICANT: Song, Yong
APPLICANT: Sjasstad, Michael
TITLE OF INVENTION: Methods and Materials Relating to No.
TITLE OF INVENTION: Polypeptides and Polynucleotides
FILE REFERENCE: HYS-7CIP
CURRENT APPLICATION UNMBER: US/10/216,038
CURRENT FILING DATE: 2002-08-08
PRIOR APPLICATION NUMBER: US 09/563,786
PRIOR APPLICATION NUMBER: US 09/491,404
PRIOR FILING DATE: 2000-01-25
NUMBER OF SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                    Tang, Y Tom
Liu, Chenghua
Drmanac, Radoje T
                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                               US20030124573A1el Growth
```

ᄍ

Result

ö

Query Score Match Length DB

IJ

Description

SUMMARIES

```
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: WOOd, William I.
FITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C3
CURRENT APPLICATION NUMBER: US/10/216,163
CURRENT APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-47 (1-128) x US-10-216-038-1 (1-426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-216-038-1
                                                                                                                                                                                                                                                                                                                                                         RESULT 2
US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUFIFE
; SEQ ID NO 1
FENCTH: 426
                                                                                                                                                                                                                                                                                                                        Sequence 71, Application US/102 Publication No. US20030149239A1
                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 42
TYPE: DNA
                                                                                                                                                                                                                                                                                        APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
NAME/KEY: misc_feature
LOCATION: (426)...(426)
OTHER INFORMATION: n = A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No . .
                                                                                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MetalaargIleLeuIleLeuLeuLeuGlyGlyLeuValalaLeuCysalaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                        ACGGATATTGACTTCTTCTGCGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                          ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                        Application US/10216163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.47e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ့
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
111
9
8
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
    ; Sequence 71, Application US/10218765; Publication No. US20030187201A1; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Desnoyers, Luc; APPLICANT: Gerritsen, Marry; APPLICANT: Goddard, Audrey; APPLICANT: Goddwski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores: Pred. No.:
                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-216-163-71
                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                US-10-218-765-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH: 521
                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38
   Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.98e-83
600.00
93.75%
86.72%
88.76%
```

Ś 밁 Ś 밁 Ş 밁 Ş 맑 Ś 밁 Ś 밁 Ş

```
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR PPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR PILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-47 (1-128) x US-10-216-163-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Remaining Prior Application data removed - See File Wrapper or PALM
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
                                                                                              338 CCCAGGAACTTGGTCAAGGAACAGCGTGTTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                     158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
398 ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                          278 TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                 218 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr :::||||||||:::||||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ### TATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                             ThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                            LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                    ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                           PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
421
                                                   128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            521
111
9
8
0
                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                      277
                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                             217
```

397

```
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
                                           PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                              PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 2002-04
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1997-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/218,765
CURRENT FILING DATE: 2002-08-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: P3530P1C19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/062287
FILING DATE: 1997-10-17
APPLICATION NUMBER: 60/63549
FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/079294 FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/069873 FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/064103 FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1998-0
FILING DATE: 1998-08-17
APPLICATION NUMBER: 60/
FILING DATE: 1998-08-26
                                        APPLICATION NUMBER: 60/096791
                                                                                                                                                           APPLICATION NUMBER: 60/095302
                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/081955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/079656
                                                                      APPLICATION NUMBER: 60/096146
                                                                                     FILING DATE:
                                                                                                   APPLICATION NUMBER:
                                                                                                                  FILING DATE:
                                                                                                                                               FILING DATE: 1998-08-04
                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/090691
                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/089538
                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/089532
                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/085579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/085323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/084441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                APPLICATION NUMBER: 60/095318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-05-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-04-09
                                                         1998-08-11
                                                                                     1998-08-10
                                                                                                                                                                                                                                                                                         1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-05-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-04-15
                                                                                                                                                                                                                                  1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-04-22
                                                                                                                  1998-08-04
                                                                                                                                                                                                                                                                                                                       1998-06-18
                                                                                                                                                                                                                                                                                                                                                      1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                             1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Austin L.
                                                                                                                                                                                                      1998-06-25
                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                       60/090472
                                                                                                                                                                                                                                                                                                                                       60/089905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/081819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/059113
                60/097986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/082804
                                                                                                   60/095916
                                                                                                                                                                                         60/091982
                                                                                                                                                                                                                    60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                           60/086392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
PRIOR
                                                                                  PRIOR APPLICATION NUMBER: 60/115733
PRIOR FILING DATE: 1999-01-12
PRIOR APPLICATION NUMBER: 60/119549
                                                                                                                                                                                                                                                                             PRIOR PRIOR
                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1998-10-28
PRIOR APPLICATION NUMBER: 60/106248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-09-25
PRIOR APPLICATION NUMBER: 60/101916
                                                                                                                                                                                                                                                                                                       DR FILING DATE: 1998-11-03
DR APPLICATION NUMBER: 60/108787
DR FILING DATE: 1998-11-17
DR APPLICATION NUMBER: 60/108801
DR FILING DATE: 1998-11-17
DR APPLICATION NUMBER: 60/108849
DR FILING DATE: 1999-11-18
 APPLICATION NUMBER: 60/125259
FILING DATE: 1999-03-19
APPLICATION NUMBER: 60/125775
                                           FILING DATE: 1999-02-10
APPLICATION NUMBER: 60/123618
FILING DATE: 1999-03-10
                                                                                                                                                                                                     APPLICATION NUMBER: 60/113605
FILING DATE: 1998-12-23
APPLICATION NUMBER: 60/113621
                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/112422
FILING DATE: 1998-12-15
APPLICATION NUMBER: 60/113296
FILING DATE: 1998-12-22
                                                                                                                                FILING DATE:
                                                                                                                                               APPLICATION NUMBER: 60/115565
                                                                                                                                                            FILING DATE:
                                                                                                                                 1999-01-1
```

APPLICATION NUMBER: 60/098544
FILING DATE: 1998-08-31
APPLICATION NUMBER: 60/099596
FILING DATE: 1998-09-09
APPLICATION NUMBER: 60/099598 FILING DATE: 1998-09-10
APPLICATION NUMBER: 60/099812
FILING DATE: 1998-09-10
APPLICATION NUMBER: 60/099816 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/099811 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/100038 FILING DATE: 1998-09-09 APPLICATION NUMBER: 60/099803

OR FILING DATE: 1998-09-11
OR APPLICATION NUMBER: 60/100385
OR FILING DATE: 1998-09-15
OR APPLICATION NUMBER: 60/100390
OR FILING DATE: 1998-09-15
OR APPLICATION NUMBER: 60/100627

FILING DATE: 1998-09-18
APPLICATION NUMBER: 60/100919 FILING DATE: 1998-09-16
APPLICATION NUMBER: 60/100848 FILING DATE: 1998-09-17 APPLICATION NUMBER: .60/101477

PRIOR FILING DATE: 1998-09-24
PRIOR APPLICATION NUMBER: 60/101786 FILING DATE: 1998-09-24 APPLICATION NUMBER: 60/101741 APPLICATION NUMBER: 60/101738

PRIOR FILING DATE: 1998-09-24
PRIOR APPLICATION NUMBER: 60/101922 APPLICATION NUMBER: 60/106178

PRIOR FILING DATE: 1998-10-29
PRIOR APPLICATION NUMBER: 60/106464
PRIOR FILING DATE: 1998-10-30 PRIOR APPLICATION NUMBER: 60/106905

FILING DATE: 1998-12-23 APPLICATION NUMBER: 60/115558 1999-01-1

Page

APPLICATION NUMBER: 60/127887

APPLICATION NUMBER: 60/126773

FILING DATE: 1999-04-05

```
Best Local Similarity:
Query Match:
DB:
                                                                         Ś
                                                                                                                                         Ş
                                                                                                                                                                             DЬ
                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                       Score:
          δ
                                               밁
                                                                                                             В
                                                                                                                                                                                                                                           US-10-019-455A-47 (1-128) \times US-10-218-765-71 (1-521)
                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/130232
FILING DATE: 1999-04-21
APPLICATION NUMBER: 60/131022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1999-07-20
APPLICATION NUMBER: 60/145698
FILING DATE: 1999-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/131445 FILING DATE: 1999-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/131291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/131270 FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1999-11-09
APPLICATION NUMBER: 60/166361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/146222 FILING DATE: 1999-07-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/144758 FILING DATE: 1999-07-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1999-06-22
APPLICATION NUMBER: 60/140723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1999-05-14
APPLICATION NUMBER: 60/140650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/134287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1999-04-26
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1999-12-07
APPLICATION NUMBER: 60/169495
FILING DATE: 1999-12-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/169445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/164418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/151733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/149638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/149320 FILING DATE: 1999-08-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/146963 FILING DATE: 1999-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1999-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1999-06-22
APPLICATION NUMBER: 60/141037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1999-08-
                                                                                                                                                                                                                                                                                                                                                                         Scores:
61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LING DATE: 1999-08-17
                                                                   41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                             98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                 21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                  1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCy8AlaGlyHisGly
                                                                                                                                                                              ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCATGGA
                                                                                                                                                                                                                                                                           1.98e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                           Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                            Indels:
Gaps:
                                                                                60
                                                                                                                                              40
                                                                                                                                                                                97
                                                  217
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-063-71
US-10-019-455A-47 (1-128) x US-10-219-063-71 (1-521)
                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/219.063
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06349
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
                                                             Query Match:
                                                                                       Best Local Similarity:
                                                                                                                                  Score:
                                                                                                                                                                                                                            US-10-219-063-71
                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 71, Appropriate Publication No.
                                                                                                                                                                                                                                                                                       SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker,
APPLICANT: Desno
APPLICANT: Gerri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C24
                                                                                                                                                                                                                                                                                                                                   Remaining Prior Application NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                              ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/069873
FILING DATE: 1997-12-17
APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          338 CCCAGGAACTTGGTCAAGGAACAGCGTGTGACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      278 TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          398 ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/10219063
vo. US20030187202A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kevin P.
                                           600.00
93.75%
86.72%
88.76%
                                                                                                                                                       1.98e-83
                                                                                                                                                                                                                                                                                                                                                            data removed - See File Wrapper or
                                                                                                                                  Length:
Matches:
                                                                                    Conservative: Mismatches:
                                                                Indels:
                                             0089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          397
```

Ś

41

158

218

61

81

멍 S 밁 Ś 밁 S 밁

338 101 278

121

398

US-10-219-066-71

APPLICANT:

APPLICANT: APPLICANT:

Ś

맑

```
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR PILLING DATE: 2002-04-09
PRIOR PELLUNG DATE: 2002-04-09
PRIOR PELLUNG DATE: 1997-09-17
PRIOR PILLING DATE: 1997-10-17
PRIOR PELLUNG DATE: 1997-10-28
PRIOR PELLUNG DATE: 1997-10-28
PRIOR PELLUNG DATE: 1997-10-31
PRIOR PELLUNG DATE: 1997-10-31
PRIOR PELLUNG DATE: 1997-10-31
PRIOR PELLUNG DATE: 1997-10-31
PRIOR PELLUNG DATE: 1997-10-31
PRIOR PELLUNG DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR PELLUNG DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR PELLUNG DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
                                         Remaining Prior Application data removed -
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 71, Application US/10219066 Publication No. US20030187203A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baker,
APPLICANT: Desnoy
APPLICANT: Gerri
                                                                                                                                    PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                  PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/219,066
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3530P1C27
TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan, Jean-Philippe F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                      See File Wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-066-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-47 (1-128) x US-10-219-066-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR PPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-11-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 71, Application US/10219067 Publication No. US20030187204A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                         APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                        FILE REFERENCE: P3530P1C51
CURRENT APPLIANCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           398 ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     338 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278 TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F.
Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600.00
93.75%
86.72%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.98e-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
```

337

217

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-47 (1-128) x US-10-219-067-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                         US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER: 05 520 ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 71
                                                                                                                                                                                                                                                                Sequence 71, Application US/10219068
Publication No. US20030187205A1
                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                     APPLICANT: APPLICANT:
         APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
REFERENCE: P3530P1C31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   218
                                                                                                                                                                                                                                                                                                                                                                                          121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         158
                                                                                                                                                                                                                                                                                                                                                              398 ACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | MetalaargIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTGGGCTGGCAGTGTTTÄTGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTÄTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                   Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                         Gerritsen, Mary
Goddard, Audrey
                                                                                                                                                                                                             Desnoyers, Luc
                                                                                                                                                                                                                                  Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.98e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        157
```

```
CURRENT APPLICATION NUMBER: US/10/219,068
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR ELING DATE: 2002-04-09
PRIOR PELICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR PELICATION NUMBER: 60/062287
PRIOR PELICATION NUMBER: 60/062287
PRIOR PILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069073
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR BEDLICATION NUMBER: 60/079294
                                                                        밁
                                                                                                           Ş
                                                                                                                                                                                 Ş
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-47 (1-128) x US-10-219-068-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo Sapien US-10-219-068-71
                               S
                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
::
                                                                                                                                                                                                                                                                                                       158
                                                                          338
                                                                                                                                                    278
                                                                                                                                                                                                                            218
 398
                                   121
                                                                                                               101
                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                 98
                                                                                                                                                                                                                                                                                                                                                                                                           21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                         38
                                                                                                                                                                                                                                                  LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                            | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                             ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         arggeaagaararrgrraerrrreereceggrerrgregeterargreerergeargga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                            AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                       ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                              PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
ACGGATATTGACTTCTTCTGCGAG
                       ThrAspIleAspPhePheCysGlu 128
                                                                                                 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                    TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.98e-83
600.00
93.75%
86.72%
88.76%
   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521
111
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PALM
                                                                                                                                                          337
                                                                                                                   120
                                                                                                                                                                                                                                    277
                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97
                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                                               217
                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                       157
```

; Sequence 71, Application US/10219069 ; Publication No. US20030187206A1 ; GENERAL INFORMATION:

US-10-219-069-71

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: P3530PLC40
CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06913
PRIOR PILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR PILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/0649873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/079910
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
           Š
                                                                     밁
                                                                                                                       Ş
                                                                                                                                                                            B
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-47 (1-128) x US-10-219-069-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Remaining Prior A
NUMBER OF SEQ ID
SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 521
                                                                                                                                                                              158
                81
                                                                                                                          61
                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                        98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                    21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                               38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                             1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                      LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                              ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                  | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baker, Kevin
                                                                        AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application data removed - See File Wrapper or PALM. NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.98e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                            80
                                                                                                                                                                              217
                                                                                                                                                                                                                                                                                        157
                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                               97
                                                                                                                                                                                                                                   60
```

```
; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo S
US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
                                       ঠ
                                                                                   US-10-019-455A-47 (1-128) x US-10-219-073-71 (1-521)
                                                                                                                                                                    Percent Similarity:
Best Local Similari
                                                                                                                                                                                                                                      Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3530P1C52

CURRENT APPLICATION NUMBER: US/10/219,073

CURRENT FILING DATE: 2002-08-14

PRIOR APPLICATION NUMBER: 10/119,480

PRIOR FILING DATE: 2002-04-09

PRIOR APPLICATION NUMBER: 60/059113

PRIOR FILING DATE: 1997-09-17

PRIOR APPLICATION NUMBER: 60/06287

PRIOR APPLICATION NUMBER: 60/063549

PRIOR FILING DATE: 1997-10-28

PRIOR APPLICATION NUMBER: 60/064103

PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 71, Application US/102 Publication No. US20030187207A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/066973
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                    NO::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         398 ACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                    Similarity:
ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGGCTGTATGTGCTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 397
                                       MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219073
                                                                                                                                          1.98e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                              Matches:
                                                                                                                          Gaps:
                                                                                                                          521
111
9
0
```

맑

S

21

MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40

```
APPLICANT: Smill, Victoria
APPLICANT: Weephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C49
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: US/10/219,475
CURRENT FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/062549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064973
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-219-475-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                         ) ORGANISM: Homo Sapien US-10-219-475-71
Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 71, Ap
Publication No.
                                                                                                       SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Baker, Kevin P.
                                                                                                                                                   Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                               PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>AAAAAAGGGCAGCAGCATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10219475 vo. US20030187208A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        157
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-47 (1-128) x US-10-219-475-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-480-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                   CURRENT APPLICATION NUMBER: US/10/219,480
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR PRIOR DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR PRILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06403
PRIOR APPLICATION NUMBER: 60/06403
PRIOR APPLICATION NUMBER: 60/06403
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06403
PRIOR APPLICATION NUMBER: 60/06403
PRIOR APPLICATION NUMBER: 60/069073
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 71, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
APPLICANT: Goddard, Audre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: P3530P1C38
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             398 ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 ThraspileAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38 Aresetaksakratrerraertrreerecessiertrerseterarsreerecarsak
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MetalaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                  Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F
Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US20030187209A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.98e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              521
111
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       217
```

```
RESULT 12
US-10-219-483-71
US-quence 71, Application US/10219483
; Sequence 71, Application US/10219483
; Publication No. US20030187210A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Desnoyers, Luc;
; APPLICANT: Gerritsen, Mary
; APPLICANT: Goddard, Audrey
; APPLICANT: Goddwski, Paul J.
; APPLICANT: Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: DNA
; ORGANISM: Homo Sapien
US-I0-219-480-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U\dot{S}-10-019-455A-47 (1-128) x U\dot{S}-10-219-480-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
CURRENT APPLICATION NUMBER: US/10/219,483
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
                                                    APPLICANT: WOOD, WILLIAM I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C43
                                                                                                                                                                                APPLICANT:
                                                                                                                            APPLICANT:
                                                                                                                                             APPLICANT:
                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                     398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                            : Goddard, Audrey
: Godowski, Paul J.
: Gorimaldi, J. Christopher
: Gurney, Austin L.
: Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGCAAGAATATTGTTACTTTTCCTCCCGGTTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LystysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                         ThraspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                   ACGGATATTGACTTCTTCTGCGAG
                                                                                                        Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.98e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       521
111
9
8
0
                                                                                              AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97
```

US-10-219-525-71

Sequence 71, Application US/10219525
Publication No. US20030187211A1
GENERAL INFORMATION:

APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mary

```
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063249
PRIOR PILING DATE: 1997-10-27
PRIOR PILING DATE: 1997-10-28
PRIOR PELICATION NUMBER: 60/064103
PRIOR PELICATION NUMBER: 60/069873
PRIOR PELING DATE: 1997-12-17
PRIOR PELICATION NUMBER: 60/078910
PRIOR PELICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR PILING DATE: 1998-03-25
PRIOR PILING DATE: 1998-03-25
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                    S
                                                                                                                   밁
                                                                                                                                                                       $
                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-47 (1-128) x US-10-219-483-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-219-483-71
멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 71
LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
   398
                               121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                            218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  158
                                                                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98 ATATTTÄTGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr
                                                                                                               ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCCTGTGCATGGA
                                                                                                                                                                                                                                                                           PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe
                                                                                                                                                                                                                                                                                                                                                            AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCTGGAGAA
                                                                                                                                                                                                                                      TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.98e-83
600.00
93.75%
86.72%
88.76%
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      521
111
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                            397
                                                                                                                                                                                                                                               337
                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                     277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217
```

```
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/079870
PRIOR APPLICATION NUMBER: 60/0798910
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079298
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                               В
                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-47 (1-128) x US-10-219-525-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-525-71
                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Remaining Prior Application data NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 521
101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                     218
                                                                                                                                                                                                                                                                                       158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
                                                                                                                               81
                                                                                                                                                                                                                  61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                               41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                          98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                  21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                             PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                     AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.98e-83
600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      removed - See File Wrapper or .PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                     337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97
                                                                                                                                                                                                                                                                                            217
```

```
TITLE OF INVENTION: SCCRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PIC41
CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/06288
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
                                             Ş
                                                                                                     밁
밁
                                                                                                                                                                                                        US-10-019-455A-47 (1-128) x US-10-219-526-71 (1-521)
                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                 score:
                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 71, App
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker,
APPLICANT: Desnoy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-03-27
Remaining Prior Application d
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 521
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             398 ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                          21 MetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThr 40 :::|||||||||||||
                                                                                                     38
98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTATACT
                                                                                                                                1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThraspileaspPhePheCysGlu 128
                                                                                                     ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGCGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10219526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US20030187212A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kevin P
                                                                                                                                                                                                                                                              600.00
93.75%
86.72%
88.76%
                                                                                                                                                                                                                                                                                                                                                                                         1.98e-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                data removed - See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                 0000
                                                                                                           97
                                                                                                                                                              20
```

```
APPLICANT: SMLLI, VECULA
APPLICANT: WATERLAB, Jean-Philippe F.
APPLICANT: WATERLAB, COlin L.
APPLICANT: WATERLAB, COLIN L.
APPLICANT: WATERLAB, COLIN L.
APPLICANT: WATERLAB, COLIN L.
APPLICANT: WATERLAB, COLIN L.
APPLICANT: WATERLAB, COLIN TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PIC54
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1997-10-21
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                LENGTH: 521
TYPE: DNA
ORGANISM: Homo Sapien
US-10-219-530-71
                                       Pred. No.:
                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 71, Appublication No.
                                                                                                                                                                              Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTTGGGCTGGCAGTGTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10219530 to. US20030187213A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
1.98e-83
600.00
93.75%
Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
```

Percent Similarity:

```
Ś
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-47 (1-128) x US-10-219-530-71 (1-521)
                                                                 B
                                                                                                   Ş
                                                                                                                                       밁
                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                   338 CCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTTCCCACC
                                                                                     101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                        278
                                                                                                                                                                                                       218 AAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCTGGAGAA 277
                                                                                                                                                                                                                                                                            158 ATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATTAACGTT
398 ACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                            61 LYSLYSGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                98 ATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTCTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                   38 ATGGCAAGAATATTGTTACTTTTCCTCCCGGGTCTTGTGGCTGTATGTGCTGTGCATGGA
                                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                                                   1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly
                     ThrAspIleAspPhePheCysGlu 128
                                                                                                                                     TTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGTTATTTC
                                                                                                                                                          PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86.72%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                000
                                                                                                                                                                                                                                                                                                                                                                                                                            97
                                                                                                                                              337
                                                                                                                                                                                                                                                                                     217
```

Search completed: December 30, Job time : 289.193 secs 2003, 02:01:08

ი

```
OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                  Result
                                                                                                                                                                                   No.
                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                         222.5
208
171.5
93.5
91.5
91.5
                                                                                                                                                                                     Score
                                                                                                                             275.5
264.5
247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December 29, 2003, 16:24:24; Search time 40.6947 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MARILILLLGGLVALCAGHG......RVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-47
                                                                                                                                                                                   Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 569978 segs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                   Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
  /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/BCTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                      Length DB
                             459
330
581
305
596
596
3565
2793
2757
2757
US-08-578-649-8
US-08-578-649-24
US-08-578-649-3
US-07-646-5378-1
US-08-306-6918-48
PCT-US93-06251-79
US-09-300-958A-28
US-09-356-952-11
                                                                                                                                            US-08-578-649-1
US-08-578-649-18
                                                                                                                                                                                      ij
                                                                                                                              US-08-578-649-4
                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (without alignments)
1388.315 Million cell updates/sec
  Sequence 4, Appli
Sequence 8, Appli
Sequence 24, Appli
Sequence 3, Appli
Sequence 1, Appli
Sequence 48, Appl
Sequence 79, Appl
Sequence 79, Appl
Sequence 28, Appl
Sequence 28, Appl
Sequence 11, Appl
                                                                                                                                                                                        Description
                                                                                                                                             Sequence 1, Appli
Sequence 18, Appl
```

ALIGNMENTS

US-08-578-649-

```
; Sequence 1, Application US/08578649 ; Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 57,000 Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
COMPUTER: IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                               FILING DATE: 20-JULY-1993
ATTORNEY/AGENT INFORMATION:
NAME: ANDREW L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       805 Third Avenue
(212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24 247.2
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-47 (1-128) x US-08-578-649-1 (1-459)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                   US-08-578-649-18
                                                                                                                                                                                                                                                     Sequence 18, Application US/08578649
Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                          APPLICANT: Ulrich beyern
APPLICANT: Reinhard Buttner
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 459 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single
                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    157 GAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        268 AAGGGCCGTGGGCGCTCTTCTGGGGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTG 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       217 CGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG------
                                                                                                                                                                                                                                                                                                                                                            388 GGCAAAGTCGATGTGAAGACAGACAAATGGGATTTCTACTGCCAG 432
                                                                                                                                                                                                                                                                                                                                                                                                   114 AlaThrLysGluIleProThrThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97 CCTGGTGTCAGGGGTGGTCCTATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAG 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40 Aresecces Teceros -- Tecerres Teater Teater Teceros Teres Teres Teres 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76 AsnGlyAlaGly---AlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56 ArgPheIleAsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGlu 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19 HisGlyMetPhe-----MetAspLysLeuSerSerLysLysLeuCysAlaAspGlu 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MetAlaArgIleLeuIleLeuLeuLeuGlyGlyLeuValAlaLeuCysAla-----Gly 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic acid
                                                        T: 805 Third Avenue
New York
10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GluCysValTyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCys 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyIle---ValGlyTyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGlu 113
                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGCTCGCCTGGGCTATTTCCCCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAACCT 387
                                       New York
                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SdD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8.43e-30
275.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44.448
40.758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64.448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                      뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-47 (1-128) x US-08-578-649-18 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-578-649-18
                                Ş
                                                                        В
                                                                                                        Ş
                                                                                                                                               밁
                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (212) 688-920
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-JULY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . NO. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PS/
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: 4..6
OTHER INFORMATION: /function= "Startcodon Met"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                       133
304 GACAAATGGGÄTTTCTACTGCCAG 327
                                    121 ThrAspIleAspPhePheCysGlu 128
                                                                                                                                                                                                                                                           63
                                                                                                                                                                                                                                                                                                73
                                                                                                                                                                                                                                                                                                                                43 LeualaargalaGinGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 62
                                                                                                                                                                                                                                                                                                                                                                    13 ATGCCAAAATTAGCAGATCGTAAATTATGTGCAGATCAGGAGTGCAGCCACCCTATCTCC 72
                                                                                                                                                                                                                                                                                                                                                                                                       23 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                               TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 100
                                                                                                                                                                                                                                                      GlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGly---AlaPhe 81
                                                                                                                                                                                                                                                                                              ATGGCTGTGGCCCTTCAGGACTACATGGCCCCGACTGCCGATTCCTGACCATTCACCGG
                                                                                                        ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                       GGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTC 183
                                                                        CCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAAACCTGGCAAAGTCGATGTGAAGACA
                                                                                                                                                 Wordperfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    67.59%
46.30%
39.13%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.86e-28
264.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                       132
```

US-08-578-649-4

Sequence 4, Application US/08578649 Patent No. 5770366

475

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                       US-10-019-455A-47 (1-128) x US-08-578-649-4 (1-581)
                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-578-649-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATION SYSTEM: PC-DOS
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 30,575
REFERENCE/DOCKET NUMBER: 30ER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (212) 688-92
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Reinhard Buttner APPLICANT: Brigitte Kaluza TITLE OF INVENTION: MELANOWA NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
COMPUTER: IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                  125 GTGCTCCTTGGCATCGTCGTCTTGTCTGTTTTTTCAGGGCCTAGCAGGGCTGATCGAGCT 184
 წ
                                                                      43
                                                                                                                                      23 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer 42
                                                                                                                                                                                                                   8 LeuLeuGlyGlyLeuValAlaLeuCysAlaGlyHisGly------MetPhe 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid
                                                        LeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 62
GlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGly---AlaPhe 81
                                                                                                           ATGCCCAAGCTGGCTGACTGGAAGCTGTGTGCGGACGAGGAATGCAGCCATCCTATCTCC 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Felfe & Lynch
805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ulrich Bogdan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                          mat_peptide
179..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                          1.22e-25
247.00
60.16%
42.97%
36.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.
                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
 US-10-019-455A-47 (1-128) x US-08-578-649-8 (1-305)
                                                                                                                                            Alignment Scores:
                                                                                                                                                                                     US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (212) 688-92
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.
FILLING DATE: 20-July_1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                              No.:
                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                  NAME/KEY: misc_RNA
LOCATION: join(1..29, 277..305)
OTHER INFORMATION: /function= "Primer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 29-Ju
                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: BOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-I
SOFTWARE: Wordperfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP:
                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             356 TGGGGAGGCAGTGTTCAGGGAGGTTACTATGGAGACCTGGCAGCCCGCCTGGGCTATTTC 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305 GGCCAAGTGGTGTATGTCTTCTCCAAGTTG------AAGGGCCGTGGGCGCCTTTTC 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       416 CCCAGTAGCATTGTCCGGGAGGACCTGAACTCGAAACCTGGCAAAATTGATATGAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               476 GATCAATGGGATTTCTACTGCCAG 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10022
                                                                                                                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ThrasplieaspPhePheCysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Felfe & Lynch
                                                                                                                                                                                                                                                                              CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64.65%
45.45%
32.91%
                                                                                                           1.37e-22
222.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                        æ
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                BOER 1035-PFF/ALT
                                     Gaps:
                                                        Mismatches:
Indels:
                                                                                       Conservative:
                                                                                                                           Length:
                                   305
30
30
30
```

멍

Ş

밁 Ś 밁 Ś

Ś B.

70 67 50

ş ₽, Ś 밁

S 밁

RESULT 5 US-08-578-649-24

GENERAL INFORMATION:

ADDRESSEE:

COUNTRY:

USA

1002

New York

MOLECULE TYPE:

STRANDEDNESS:

linear

FEATURE: NAME/KEY: LOCATION: LOCATION:

..569)

NAME/KEY:

NAME/KEY:

exon

```
Sequence 24, Application US/08578649
Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-UJLY-1994
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: DE P 43 24 247.2
PRIOR APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-UJLY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
NAME: Andrew L. Tiajoloff
                                                                                                                                                                                                                                 TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
LENGTH: 596 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
APPLICANT: BRIGITE KALUZA
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: B07
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238 GACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACAGATAAATGGGATTTCTAC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30 LysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArgAlaGlnGluAsp 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAspPhePhe 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AspHisGln---AspGluMetGlyIleValGlYTyrPheProSerAsnLeuValArgGlu 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerLysLeuValThrGluAsnGlyAlaGly---AlaPheTrpAlaGlySerValTyrGly 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGTTTTCGGCGGATCAGGAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCTTCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ĠĂŤTACTATGGAĠĂŤCTGGTCGCTCGCCTGĠĠĊŤĂŤŤŤĊĊĊĊĀĠŤĀGCATTĠŤĊĊĠĀĠĀĠ 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACATGOCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrValTyr 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rccaactric-----aaccccrccccccrccccrticiccccaccacccaccircacca
                                                                                                                                                                                                                   : 596 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ulrich Bogdan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PS/2
                        sig_peptide
                                                                                                  CDS
join(40..111,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Felfe & Lynch
                                                                                                                                                               DNA (genomic)
                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inch 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PC-DOS
                                                                                                        40..166, 214..347, 393..503,
                                                                                                                                                                                                                                                                                                                                                                 BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-47 (1-128) x US-08-578-649-24 (1-596)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                        RESULT 6
US-08-578-649-3
                                                                                                                                                   Ś
                                                                                                                                                                                             밁
                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                      밁
                Sequence 3, Application US/08578649
Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
FEATURE:
NAME/KEY:
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: one-of(194, 369, 527)
OTHER INFORMATION: /note= "N in positions 194, 369
OTHER INFORMATION: and 527 denotes an indefinite number and sequence
OTHER INFORMATION: of nucleotides "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   157 GÁGTGCAGCCG-TAAGAATGGGGGAGGGTAGAATTGGGNCCCTTCTATTCCTTCCCTAGAC 215
                                                                                                                                                                                           504 GTGGAGTGTCATGGGGGCTGGCANTTTCCCCTTTCTCTTTTTCAGAAATGGGATTTCTAC
                                                                                                                                                                                                                                                                        447 AGCATTGTCCGAGAGGACCAGACCCTGAAACCTGGCAAAGTCGATGTG---AAGACAGAC
                                                                                                                                                                                                                                                                                                          103 AsnLeuVallArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAsp 122
                                                                                                                                                                                                                                                                                                                                                      387 CCCCAGGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGCTATTTCCCCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                       127 ÇysGlu 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36 GlucysValTyr------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97 CCTGGTGTCAGGGGTGGTCCTATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAG 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19 HisGlyMetPhe------MetAspLysLeuSerSerLysLysLeuCysAlaAspGlu 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40 Arddcccddrcccddorg---recchiddrercarcarcarcreddaercreddcirectedda
                                                                                                                    564 TGCCAG 569
                                                                                                                                                                                                                                   123 Ile-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60 ValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGly 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40 ThrileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsn 59
                                                                                                                                                                                                                                                                                                                                                                                             86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MetalaarqIleLeuIleLeuLeuLeuGlyGlyLeuValalaLeuCysala-----Gly
                                                                                                                                                                                                                                                                                                                                                                                       -----valTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPheProSer 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCTCTTCTGGGGAGGCAGCGTGGGTCTTGGGAGAGTGAAANAGCTTTTAACTCCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---AlaPheTrpAlaGlySer------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
549..569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
214..347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          393..503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40..166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.94e-20
208.00
48.35%
33.52%
30.77%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                         -----AspPhePhe 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18
                                                                                                                                                                                                                                                                                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85
                                                                                                                                                                                                         563
                                                                                                                                                                                                                                                                                      503
```

COMPUTER: IBM PS/ OPERATING SYSTEM: MEDIUM TYPE:

```
Percent Similarity:
Best Local Similarity:
Query Match:
                Ş
                                           US-10-019-455A-47 (1-128) x US-08-578-649-3 (1-3565)
                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                            US-08-578-649-3
                                                                                                                                  score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
PRIOR DATE: 20-0uly-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOKET NUMBER: BOER 1035-PFF.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 3565 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE
                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: New York
                                                                                                                                                                                                      NAME/KEY:
LOCATION: one-of(2216)
OTHER INFORMATION: /note= "N in
OTHER INFORMATION: denotes an if
OTHER INFORMATION: nucleotides"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                               LOCATION:
                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                         LOCATION:
1 MetAlaArgIleLeuIleLeuLeuGlyGlyLeuValAlaLeuCy8Ala-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sig_peptide
1378..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Felfe & Lynch
                                                                                                                                                                                                                                                                                               exon
3232..3252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                        2804..2914
                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                   1586..1719
                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                             1378..1504
                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
                                                                                       7.05e-14
171.50
51.26%
38.66%
25.37%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/578,649
                                                                                                                                                                                                                       /note= "N in position 2216 denotes an indefinite number ans sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BOER 1035-PFF/ALT
                                                                                                                                  Length:
Matches:
                                                                                          Mismatches:
Indels:
                                                                                                                      Conservative:
                                                                               46
15
21
37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
         Query Match:
DB:
                                                                   Score:
```

```
US-07-646-537B-1
                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                 US-07-646-537B-1
                                                                                     Pred. No.:
                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/07646537B Patent No. 5348864 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (609) 921-4526 INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (609) 921-5901
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Gaul, Timothy J.
REGISTRATION NUMBER: 33,1
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: VANUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Barbacid,
                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                  HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: P.O. Box
CITY: Princeton
STATE: New Jerse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                           STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1378 ATGGCCCGGTCCCTGGTG---TGCCTTGGTGTCATCATCTTGCTGTCTGCCTTCTCCGGA 1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1495 GAGTGCAGCCGTAAGAATGGGGAGGGGTAGAATTGGGCTTGGGTGTAGCCTGTGTGGAT 1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1435 CCTGGTGTCAGGGGTGGTCCTATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAG 1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1615 GACTACATGGCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTC 1674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1555 GTGCTGCATTCCCCTTCTATTCCTTCCCTAGACCCTATCTCCATGCCTGTGGCCCTTCAG 1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1675 TTCTCCAAGCTG------AAGGGCCGTCGGCGCTCTTCTGGGGAAGGCAGCGTG 1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19 HisGlyMetPhe------MetAspLysLeuSerSerLysLysLeuCysAlaAspGlu 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49 AspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrVal 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69 TyrSerLysLeuValThrGluAsnGlyAlaGly---AlaPheTrpAlaGlySerVal 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36 GluCys-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08543-4000
                                                                                                                                                                                                                                                                                                              nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P.O. Box 4000
                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bristol-Myers Squibb Company
                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                       CDNA
0.00481
93.50
52.86%
32.86%
13.83%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vav Proto-Oncogene Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mariano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/07/646,537B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33,111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  010
                             Mismatches:
                                              Matches:
Conservative:
        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -ValTyrThrileSerLeuAlaArgAlaGlnGlu 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37
```

თ

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-47 (1-128) x US-07-646-537B-1 (1-2793)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-306-691B-48
                                                                                                                                                           US-08-306-691B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 48, Application US/08306691B Patent No. 5734039
US-10-019-455A-47 (1-128) x US-08-306-691B-48 (1-2757)
                                               Query Match:
                                                                                              Score:
                                                                                                                            Alignment Scores:
                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                   TELEX: No. 5734039e
INFORMATION FOR SEQ ID NO: 48:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Calabretta, Bruno
APPLICANT: Skorski, Tomasz
TITLE OF INVENTION: ANTISENSE
TITLE OF INVENTION: OLIGONUCLEOTIDES TARGETING COOPERATING ONCOGENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                Local Similarity:
                                                                                                              Хо.:
                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                  NAME: Monaco, Daniel A. REGISTRATION NUMBER: 30, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: September 15, 1994
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                   TELEPHONE: (215) 568-8383
TELEPAX: (215) 568-5549
TELEX: No. 5734039e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2429 GATATCATC-----AAGATCCTCAATAAGAAGGGACAGCAAGGCTGGTGGCGT 2476
                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2516 TATGTGGAGGAAGAC----TATTCCGAA 2539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2477 GGGGAGATCTACGGCCGG-----
                                                                                                                                                                                                                       ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   104 LeuvalArgGluGlnArgValTyrGlnGlu 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64 GlnGlnTjeTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAla 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44 AlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Philadelphia
                                                                                                                                                                                                         nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pennsylvania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: Seidel, Gonda, Lavorgna & Monaco, P.C.
Two Penn Center, Suite 1800
                                                                                                                                                                                                                         2757 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Calabretta, Bruno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM PS/2
                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Diskette, 3.50 inch, 720 Kb
                                                                                                                                                                                             double
                                                                                               0.00903
                                                  52.86%
32.86%
13.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/306,691B
                                                                                                                                                                                                                                                                                                                                                 30,480
                                                                                                                                                                                                                                                                                                                                          8321-8
                                                       Mismatches:
Indels:
                                                                                                    Length:
Matches:
                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----ATCGGCTGGTTCCCTTCTAAC 2515
                                           23
20
20
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US93-06251-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 79, Application PC/TUS9306251; GENERAL INFORMATION:
                Ş
                                                밁
                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                     PCT-US93-06251-79
                                                                                                                                                          Query Match:
                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                          SCOTE:
                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: DIGIGIO, Frank S.
REGISTRATION NUMBER: 31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: 516-742-4343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 19930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                  TYPE:
                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2472 TACGTGGAGGAAGAT----TATTCTGAA 2495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104 LeuvalArgGluGlnArgValTyrGlnGlu 113
                 64 GlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAla 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Garden City
                                                                                                                                                                                                                                                                                                                                  nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: SCULLY, SCOTT, MURI
400 Garden City Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                    2757 base pairs
                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19930630
                                                                                                                                                                                                                                                                                     DNA (genomic)
                                                                                                                                                                                                                                                                                                                       double
                                                                                                                                                             32.86%
13.54%
                                                                                                                                                                                                          0.00903
91.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCOTT, MURPHY & PRESSER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US93/06251
                                                                                                                                                                                                                         Length:
                                                                                                                                                                  Indels:
                                                                                                                                                                                                               Matches:
```

```
US-10-019-455A-47 (1-128) x PCT-US93-06251-79 (1-2757)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Wickstrom, Eric and Rife, Jason P.
TITLE OF INVENTION: Trivalent Synthesis of Oligonuclectides Containing
TITLE OF INVENTION: Stereospecific Alkylphosphonates and Arylphosphonates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2385 GACATCÁTC------ÀAGATCCTTAACAAGAAGGÁCAGCAAGGCTGGTGGCGA 2432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2325 GCCAAAGCCCGCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAGGAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44 AlaArgAlaGlmGlmAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64 GlnGlnileTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAla 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 103
2325 GCCAAAGCCCGCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAGGAGGGT 2384
                                                    44 AlahrgalaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2384
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-300-958A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-47 (1-128) x US-09-300-958A-30 (1-4762)
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/083,331
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/98,070
PRIOR FILING DATE: 1998-08-27
PRIOR APPLICATION NUMBER: 60/118,624
PRIOR FILING DATE: 1999-02-04
NUMBER OF SEC ID NOS: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-300-958A-30
                                                                                                                                                 US-09-300-958A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 30, Application US/09300958A Patent No. 6495319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 30
LENGTH: 4762
                                                                                   Patent No. 6495319
GENERAL INFORMATION:
                                                                                                                        Sequence 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: P-PH 3457
CURRENT APPLICATION NUMBER: US/09/300,958A
CURRENT FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods TITLE OF INVENTION: Using Same FILE REFERENCE: P-PH 3457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Welsh, Jo
APPLICANT: Trenkle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT: McClelland, Michael
APPLICANT: Welsh, John
APPLICANT: Trenkle, Thomas
TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2472 TACGTGGAGGAAGAT----TATTCTGAA 2495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2385 GACATCATC------ÀAGATCCTTAACAAGAAGGACAGCAAGGCTGGTGGCGA 2432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2433 GGGGAGATCTATGGCCGG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2405 CTGGGCATTGCCATCGCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTG 2464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104 LeuvalArgGluGlnArgValTyrGlnGlu 113
                                                                                                                                                                                                                                                                                                                                                                            2465 TIGAAAGGAGATGTGGTGAAGATTTACACAAAGATG-----AGTGCAAATGGC 2512
                                                                                                                                                                                                              2552 CCATCCACATATGTGGAAGAG 2572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84
                                                                                                                                                                                                                                                      101 ProSerAsnLeuValArgGlu 107
                                                                                                                                                                                                                                                                                                                                                                                                                 61 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                 81 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Welsh, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             McClelland, Michael
                                                                                                                                                                                                                                                                                               TGGTGGAGAGGAGAAGTAAATGGCAGG--
                                                                                                                            Application US/09300958A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.0197
91.50
52.24%
32.84%
13.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -GTTGGCTGGTTCCCTGCCAAC 2471
                                                                                                                                                                                                                                                                                                      -GTGGGCTGGTTT 2551
          0
```

```
CURRENT ETLING DATE: 1990-04-27
PRIOR APPLICATION NUMBER: 05/09/300,958A
CURRENT ETLING DATE: 1990-04-27
PRIOR APPLICATION NUMBER: 60/083,331
PRIOR PLILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/098,070
PRIOR FILING DATE: 1998-08-27
PRIOR PELICATION NUMBER: 60/118,624
PRIOR PELICATION NUMBER: 60/118,624
PRIOR FILING DATE: 1999-02-04
NUMBER OF SEQ ID NOS: 85
NUMBER OF SEQ ID NOS: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-47 (1-128) x US-09-300-958A-28 (1-467)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-300-958A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
; ORGANISM: Saccharomyces cerevisiae US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 28
                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11, Application US/09356952 Patent No. 6117663
                                                                                      SEQ ID NO 11
                                                                                                                                                                                                                                    APPLICANT: Boriack-Sjodin, Ann
APPLICANT: Margarit, S. M.
APPLICANT: Margarit, S. M.
APPLICANT: Cole, Philip
APPLICANT: Cole, Philip
TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF USE
TITLE OF INVENTION: THEREOF
TILE OF INVENTION: THEREOF
TILE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Using FILE REFERENCE: P-PH 3457
                                                                                                    CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT FILING DATE: 1999-07-19
EARLIER APPLICATION NUMBER: 60/093,631
EARLIER FILING DATE: 1998-07-21
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: unsure LOCATION: (462)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
NAME/KEY: unsure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: (428)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 467
                                           TYPE: DNA
                                                                LENGTH: 5398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Мо
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106 ArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIle 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212 GTGAAGATTTACACAAAGATG-------AGTĞCAAATGGCTGGTĞĞAGAĞĞAGAA 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           299 ---GGAAGGAGGATGAATAAATTCAAATCCCGTGTTGCACCCTGCACCAAAATT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260 GTAAATGGCAGG------
                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66 IleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAlaGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46 AlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51.28%
30.77%
12.57%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.00585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ength:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----GTGGGCTGGTTTCCATCCACATATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85
```

Tue

Dec

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-47 (1-128) x US-09-356-952-11 (1-5398)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-164-839-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Approximately No. 5514573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
GENERAL II
TELEPHONE: (703)412-300
TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: NAGASE, KAZUO
APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
NUMBER OF SEQUENCES: 72
CORRESPONDENCE: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
                                                      ATTORNEY AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-59
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                  MEDIUM TYPE: FLORPY disk COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Balance
                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   445 CTTTCTTCTTCCCCCCTCGACAAGTGAGTTGACCAGCATTCGTCCAATTGGAATAGTAGTC 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           505 GOTGOTTATGACTTTAATTATCCCATTAAAAAAGACAGTTCTTCGCAACTTTTGTCTGTA 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   565 CAACAAGGGGAAACCATTTATATACTTAACAAA-----AACTCATCTGGG--- 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              610 TGGTGGGATGGÁTTAGTTATTGACGÁCAGTAATGGGAAAGTTAAC---AGAGGCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    667 CCTCAAAACTTCGGTÁGACCTTTAAGA 693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 ProSerAsnLeuValArgGluGlnArg 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46 AlaGlnGluAspTyrAsnAlaPro-------AspCysArgPheIleAsnVal 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26 LeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 LysLysGlqGlnGlnIleTyrValTyrSerLysLeuValThrGlunsnGlyAlaGlyAla 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81 PheŢrpAlaGlyServalTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08164839
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48.31%
28.09%
                                                                                                                                                                                                                          435
                                                                                                                                                                                                                                                            US/08/164,839
                                                                                                10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25
25
18
35
```

FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993

CURRENT APPLICATION DATA: US

US/08/583,799

SOFTWARE: PatentIn Release #1.0,

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-47 (1-128) x US-08-164-839-3 (1-2085)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-164-839-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                         US-08-583-799-3
                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Apparent No. 560
                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
21P: 2202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
COMPATING SYSTEM: PC-DOS/MS-DOS
COMPATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                               APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
NUMBER OF SEQUENCES: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION:
                                                                                                           CITY: Arlington
STATE: Virginia
                                                                                                                                               STREET:
                                                                                                                                                               ADDRESSEE:
                                                                              COUNTRY: U.S.A.
ZIP: 22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1279 GTTTACGGCAACCACAGAGAAGATGTCACTCTGCACTACAATATCCTGAAGGCTCCCAG 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1225 -----CGGAAGATCACAGAGGACCATGCTAGTGTGGGGAAGAACATCAGCACAAAAAGC 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1174 GAGGTGÄÄCGCTGACACCATCTACTGGÄTCGTCCAAÄÄÄGATGGCCÄÄCGA----- 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1339 AAGGAGAGGGAAGTGTACAAGAAGGCGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           106 ArgGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49 AspTyrAsnAlaproAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrVal 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69 TyrSerLysLeuValThrGluAsnGlyAlaGlyAla------PheTrpAlaGlySer 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                         Application US/08583799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2085 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear

    P.C.
    1755 Jefferson Davis Highway, Fourth Floor

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pagrus major
3: liver
                                                                                                                                                                                                                                                                                                     MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                        NAKANISHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1..2082
                                                                                                                                                                                                                                                                                        NAGASE,
                                                                                                                                                                                                                                                                                                                                          YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA to mRNA
                                                                                                                                                                               OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52.50%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10.95%
                                                                                                                                                                                                                                                                                          KAZUO
                                                                                                                                                                                                                                                                                                                            KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
```

ATTORNEY/AGENT INFORMATION:

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-47 (1-128) x US-08-583-799-3 (1-2085)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-583-799-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
US-08-164-839-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 2085 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/08164839 Patent No. 5514573
                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: YASUED
APPLICANT: NAKANI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGINAL SOURCE:
                                                                                                                                                                                  APPLICANT: MOTOKI, MASAO
APPLICANT: NAGASE, KAZUO
APPLICANT: NAGASE, KAZUO
APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20...
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Oblon, No. 5607849man F. REGISTRATION NUMBER: 24,618 REFERENCE/DOCKET NUMBER: 10-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                               STREET: 1755 Jef
CITY: Arlington
                                                                                                                                                    ADDRESSEE:
                                                                         COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1174 GAGGTGAÁCGCTGACACCATCTACTGGÁTCGTCCAAÁAÁGATGGCCÁÁCGA----- 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1339 AAGGAGAGGGAAGTGTACAAGAAGGCGGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   106 ArgGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrFheProSerAsnLeuVal 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69 TyrSerLysLeuValThrGluAsnGlyAlaGlyAla------PheTrpAlaGlySer 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 AspTyrAsnAlaProAspCysArgPhelleAsnValLysLysGlyGlnGlnIleTyrVal 68
                                                         22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTTTACGGCAACCACAGAGAAGATGTCACTCTGCACTACAATATCCTGAAGGCTCCCAG 1338
                                                                                             Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : (703)412-3000
(703)413-2220
                                                                                                                                  E: P.C.
1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pagrus major
                                                                                                                                                                                                                                                                                                                           NAKANISHI, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                             YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1..2082
                                                                                                                                                                  OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -CGGAAGATCÁCÁGÁGGACCATÓCTAGTGTGGGGAAGAACATCAGCACAAAAAÁGC 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74.00
52.50%
26.25%
10.95%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-164-839-5
               Search completed: December 29, 2003, 22:08:14
                                                                                                                                                   밁
                                                                                                                                                                                      S
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-47 (1-128) x US-08-164-839-5 (1-2520)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores: Pred. No.:
Job time : 46.6947 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (703)412-300
TELEFAX: (703)413-2220
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/0 FILING DATE: 14-JAN-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Oblon, No. 5514573man F. REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM:
                                                                          1375 AAGGAGAGGGAAGTGTÄCAAGAAGGCGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1434
                                                                                                                                                     1315 GTTTACGGCAACCACAGAGAAGATGTCACTCTGCACTACAAATATCCTGAAGGCTCCCAG 1374
                                                                                                                                                                                                                              1261 -----CGGAAGATCACAGAGGACCATGCTAGTGTGGGGAAGAACATCAGCACAAAAAGC 1314
                                                                                                                                                                                                                                                                                                        1210 GAGGTGAÁCGCTGACACCATCTACTGGÁTCGTCCAAÁAÁGATGGCCAÁCGA----- 1260
                                                                                                              106 ArgGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 123
                                                                                                                                                                                      86 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 105
                                                                                                                                                                                                                                                                 69 TyrSerLysLeuValThrGluAsnGlyAlaGlyAla-----PheTrpAlaGlySer 85
                                                                                                                                                                                                                                                                                                                                          49 AspTyrAsnAlaProAspCysArgPhelleAsnValLysLysGlyGlnGlnIleTyrVal 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pagrus major
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                            74.00
52.50%
26.25%
10.95%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/004,729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/164,839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
```

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-48
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   December 29, 2003, 22:08:26; Search time 1045 Seconds (without alignments)
12918.830 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDENTITY_NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2888711 segs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 catggcatgtttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gb ba:
gb in:
gb ow:
gb ow:
gb ph:
gb ph:
gb ph:
gb ph:
gb ph:
gb v:
gb ph:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb v:
gb
em_vi:*
em_htg_hum:*
em_htg_inv:*
em_htg_other:*
em_htg_mus:*
em_htg_pin:*
em_htg_mam:*
em_htg_wam:*
em_htg_vrt:*
em_htg_hum:*
em_htgo_hum:*
em_htgo_cother:*
```

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

) 		10 5 5 4 4 3 3 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Result No.
130.8 126.4 111.6 111.6 80.2 71.8 64 63.4 63.4 63.4 63.4	. 249 249 249 249 249 181. 249		ore
1199.4.4.889.00			: 3 Q 3
44765 21151 21232 581 581 581 396 433 459	7 4 6 2 C C C B B	330 330 330 330 330 330 330 330 330 330	ength D
662	νυσσσφφ	\@@@@@@@@@@###########################	
X510 SA25 SA25 SA25 SA25 SA25 SA25 SA25 SA25	6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	110836 193137 193136 193136 193101 193101 193101 193101 193101 193101 193101 19313 19313 19313 19313 19313 19313 19313 19313 19313 19313	ID
2335 2523 2523 2523 2523 2943 2943 2016 7007 253 253 253	33261 Homo sa 43505 Homo sa 10820 Novel p 93121 Novel p 93121 Homo sa 33518 Gallus 06161 Rattus	BD010836 Novel pol BD093137 Novel pol BD093136 Novel pol BD010835 Novel pol BD010817 Novel pol BD093118 Novel pol BD093118 Novel pol BD093116 Novel pol BD093120 Novel pol AF243504 Mus muscu BD010821 Novel pol BD093122 Novel pol BD093131 Novel pol BD093131 Novel pol BD093131 Novel pol BD093131 Novel pol BD093131 Novel pol BD09316 Novel pol BD093130 Novel pol BD010829 Novel pol BD010829 Novel pol BD010816 Novel pol BD010816 Novel pol BD010816 Novel pol BD010810 Novel pol BD010810 Novel pol BD010810 Novel pol BD010810 Novel pol BD010810 Novel pol BD010810 Novel pol BD03110 Novel pol BD03110 Novel pol BD03110 Novel pol BD03103 Novel pol BD03103 Novel pol BD03103 Novel pol BD03103 Novel pol BD03103 Novel pol BD03103 Novel pol BD03103 Novel pol BD0325286quence AX451274 Sequence	scription

ALIGNMENTS

REFERENCE AUTHORS	ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	Locus	BD010836	RESULT 1
Rattus. 1 (bases 1 to 330) 1 (c), Nishi, K., Ogi, K., Okubo, S., Mogi, S., Noguchi, Y., Yoshimura, K. and Tanaka, H.	Rattus sp. Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;	Rattus sp.	JP 2001069994-A/37.	BD010836.1 GI:18639209	BD010836	Novel polypeptide and DNA thereor.	DNA	1	

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                       RESULT 2
BD093137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                               REFERENCE
                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local 9
                                                                                                                                                      ORGANISM
                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           330; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and DNA thereof
Patent: JF 2001069994-A 37 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
OS Rattus sp. (rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SHINICHI MOGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CATGGCATGTTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGAAGAGGAGGAGGGTGTC 60
                                                                                                                                                                                                                                                              Novel polypeptide and its DNA. BD093137
                                                                                                                                                                                                                                                                                                                      BD093137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A61P19/08,
Ito, Y., Nishi, K., Ogi, K., Okubo, S., Mogi, S., Yoshimura, K. and Tanaka, H.
                                                                                                                                                      Rattus sp.
                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                              WO 0102564-A/37.
                                                                                                                                                                                                                                     BD093137.1 GI:22638725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGCATGTTTATGGATAAACTTTCTTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATGTCAAGAAAGGGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACCATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                татттссссанссатенттанананаснастветассання сседения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при такжения при так
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGCATTCTGGGCTGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GOGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ccaaccacaararraacricticiangaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                               (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP 2001069994-A/37
21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 330; DB 6; Length 330; 100.0%; Pred. No. 2.4e-94; 1tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91 g
                                                                                                                                                                                                                                                                                                                         330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86 t
                                                                                                                                                                                                                                                                                                                              DNA
                           Noguchi, Y
                                                                                                                                                                                                                                                                                                                                    PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
BD010835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                               REFERENCE
                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 330;
                                                                                                                                                                                                   ORGANISM
           TITLE
                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HIDEYUKI TANAKA
OS Rattus sp. (rat)
PN WO 0102564-A/37
Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mog
Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JD 2001069994-A 36 21-MAR-2001;
                                                                                                                                                                                                                                                           BD010835.1 GI:18639208 JP 2001069994-A/36.
                                                                                                                                                                                                                                                                                                                   BD010835
                                                                                                                                                                                                                                                                                                                                    Novel polypeptide and DNA thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A61K38/17
                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                         Rattus sp.
                                                                                                                                                                                                                               Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                BD010835
                                                                                                                        Rattus.
                                                                                            (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
```

384 bp

linear

PAT 31-JAN-2002

Okubo, S., Mogi, S.,

```
JOURNAL
                                                                                                                                                                                                                                     181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                  121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                 301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TATACCATTTCTCTGGCAAGAGCACGGAAGACTACAATGCCCCGGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent: WO 0102564-A 37 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CÁTGGCÁTGTTTATGGÁTAAACTTTCTTAAGÁAGTTGTGTGCÁGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    jaitgrejakgabagggeageagretargretrartecaagerggraacagaaaarggager
                                                                                                                                   TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
ccaaccacegararreactreirereaa 330
                                                                                               TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                 ĠĠĠĠĊĀŦŦĊŦĠĠĠĊŦĠĠĊĀĠŦĠŦŦŦĀŦĠĠŦĠĀĊĊĀĊĊĀĠĠĀŤĠĀĠĀTĠĠĠĀĀŦŦĠŦĠĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOGI,
YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
62 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 330; DB 6;
100.0%; Pred. No. 2.4e-94;
/ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ع
د
د
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 6; Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                       RESULT 4
BD093136
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                       DEFINITION
ACCESSION
                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                 TITLE
                   JOURNAL
                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAKEDA CHEMICAL INDUSTRIES L'.
OS Rattus Sp. (rat)
PN JP 2001069994-A/36
PD 21-MAR-2001
PF 29-JUN-2000 JP 20001959)
PF 29-JUN-2000 JP 20001959)
PR YASUAKI ITO, KAZUNORI NIS
SHINICHI MOGI,
PI YUKO NOGUCHI, KOJI YOSHIN
PC C12N15/09, A61K38/00, A61K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                               295
                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PC C07K14
G01N33/53/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                      Novel polypeptide and its DNA BD093136
Novel polypeptide and its DNA
Patent: WO 0102564-A 36 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                      Rattus sp.
                                                                                                                                                                                    BD093136.1 GI:22638724
WO 0102564-A/36.
                                                   Yoshimura, K. and Tanaka, H.
                                                                                                                                                                        Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT</u>
                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTÁCCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                    (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source 1. .384
/organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C12P21/08,C12N15/00,A61K37/02,C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Rattus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 330; DB 6; 100.0%; Pred. No. 2.5e-94;
                                                                      Ogi, K., Okubo, S., Mogi, S., Noguchi, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                              384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                    PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                   RESULT 5
BD010817
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                              COMMENT
                                                                                                                                 REFERENCE
                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                             TITLE
                                                             JOURNAL
                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115
                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                             295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                              ω
55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                        Ito, Y., Nishi, K., Ogi, K., Okubo, S., Mogi, S., Noguchi, Y. Yoshimura, K. and Tanaka, H. Novel polypeptide and DNA thereof Patent: JP 2001069994-A 18 21-MAR-2001; TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                    Novel polypeptide and DNA thereof.
BD010817
                                                                                                                                                                                                                  BD010817.1 GI:18639190 JP 2001069994-A/18.
                                                                                                                                                                                                                                                                                       BD010817
               SOR
                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 330)
                                                                                                                                                                                  Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ANTGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus sp. (rat)
WO 0102564-A/36
11-JAN-2001
12-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02,C12R1:19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61K39/395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088// (C12P21/
              Mus sp. (mouse)
JP 2001069994-A/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 330; DB 6;
100.0%; Pred. No. 2.5e-94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                            330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105
                                                                                                                                                                                                                                                                                            DNA
```

linear

PAT 31-JAN-2002

Length 384; Indels

114

180 174 120

240 234

294

354

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                             RESULT 6
BD093118
                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 308; Conservative
                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                              ORGANISM
                                                                                                               TITLE
                                                                                                                                                     AUTHORS
                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PC C07K14/
G01N33/53//
PC C12P21/
CC C2
FH Key
FT source
FT /organi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SHINICHI MOGI,
PI YUKO NOGUC
PC C12N15/09,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 АДТСТСАДСАДАДССССАССАСТАТСТТАТТССАДСТССТДАДСАСДАДАДТССАСТ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
OGI, SHOICHI OKUI
HIDEYUKI TANAKA
OS Mus sp. (mou
PN WO 0102564-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                 Mammalia; Eutheria; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 330) 1 (bases 1 to 330) 1 (boy., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Voshimura,K. and Tanaka,H. Novel polypeptide and its DNA Patent: WO 0102564-A 18 11-JAN-2001; Patent: WO 0102564-A 18 11-JAN-2001; OKUBO, SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA, OGI, SHOICHI OKUBO, SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                        Novel polypeptide and its DNA.
BD093118
                                                                                                                                                                                                                                                                  BD093118.1 GI:22638706 WO 0102564-A/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACTATTTČTČTGGČAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GÁTGTCÁAGAÁAGGGCAGCAGATCTÁTGTTTACTCCÁÁGCTGGTAÁCAGÁÁÁACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĠĠĄĠĄĠŦŤŦŦĠĠĠĊŦĠĠĊĀĠŦĠŦŦŦĀŦĠĠŦĠĄĊĊĀĊĊĀĠĠĀŦĠĀĠĀŦĠĠĀĀŦŦĠŦĄĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chreeteratitateearahaetricitetaheahetriciteteeeeareaeeaeeaetete 60
                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-MAR-2001
29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source 1..330
/organism='Mus sp. (mouse)'.
Location/Qualifiers
 Mus sp. (mouse) WO 0102564-A/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="genomic DNA"
/db_xref="taxon:10095"
60 c 92 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 294.8; DB 6
Pred. No. 4.6e-83;
                                                                                                                                                                                                                                                                                                                                                 330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6;
                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                           PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
```

ş

Ş 皮

ş 밁 S В

Ş 밁 Ş 밁

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
BD010805
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ႘
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y Match 89.3%;
Local Similarity 93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 ARTGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PC C12N15/
A61K38/17,
PC A61K39/
PC 02,C12R
CC CC Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TATACCATTTCTCTCGCCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 cárcergiatitáregataaáctitcitáctaágaácticicicegatgáceágigtete.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 384)
1 (bases 1 to 384)
1 (c) 1 (bases 1 to 384)
1 (c) 2 (bases 1 to 384)
1 (c) 3 (bases 1 to 384)
1 (c) 4 (bases 1 to 384)
1 (c) 5 (bases 1 to 384)
1 (c) 6 (bases 1 to 384)
1 (c) 7 (bases 1 to 384)
1 (c) 7 (bases 1 to 384)
1 (c) 6 (bases 1 to 384)
1 (c) 6 (bases 1 to 384)
1 (c) 7 (bases 1 to 384)
1 (c) 6 (bases 1 to 384)
1 (c) 7 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)
1 (c) 8 (bases 1 to 384)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD010805 Sor Novel polypeptide and DNA thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD010805.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JP 2001069994-A/6.
                                                                                                                                                                       TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ccaaccacedararreactrorrereaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGAACTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĠĠŖĠŖĠŦŦŢŦĠĠĠĊŦĠĠĊŔĠŦĠŦŦŦŔŦĠĠŦĠŖĊĊŖĊĊŖĠĠŔŦĠŔĠŔŦĠĠĠŔŔŤŦĠŦŖĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                Mus sp. (mouse)
JP 2001069994-A/6
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI
                                                         29-JUN-2000 JP 2000195911
                                                                                  21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="genomic DNA"
/db_xref="taxon:10095"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:18639178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 294.8; DB 6
Pred. No. 4.6e-83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                         BD093106
                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                  JOURNAL
                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     115 TATACTATTTCTCTCGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC G01N33/53//
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dd
Id
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHINICHI MOGI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTCTCTTCTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGGGGTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                     Novel polypeptide and its DNA
                                                                                                                        Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: MO 0102564-A 6 11-JAN-2001,
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                     Eukaryota, Metazoa; Chordata, Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                   BD093106.1 GI:22638694
WO 0102564-A/6.
                                                                                                                                                                                                                                                                                                                                                                      BD093106
                                                                                                                                                                                                                                                                                                                                                                                                              BD093106
 SS PR
                                                                                                             HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              garerezaaeakaeeeekeekeekeekeererarerracreekaeereerakekekeekeekeer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geagearrengaerneacagrarrangereaceaceaceacagargagarreggaarrengger 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TÄTTTÖCCCÉAGCAACTTGGTGAAGGAGCAGCGTĞTATÄCCÉAGGÁĞĞČÉÁĞÇÁÄĞĞÁĞÁTC 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 татттессесавсьясттовттавававсавсваетвтассавваевсеассавваетт зоо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism='Mus sp. (mouse)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                    Mus sp. (mouse)
WO 0102564-A/6
11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 294.8; DB 6; Length 384; Pred. No. 4.7e-83;
                                                                                                                                                                                                                                                                                                                                                                                                                  384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
```

Ş 밁 Ş 밁 á В Ş B

Ş 멍

FEATURES

ď

France

source

Ş

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
AF243504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                   JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                     AUTHORS
                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGAGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 TATTTCCCCAGCAACTTGGTTAGAGAGCGAGCGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PI MOGI,
PI YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
PI YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
PC C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
A61K38/17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                        Mus musculus fibrocyte-derived AF243504
                                                                                                                                                                                                                   Cohen-Salmon, M., Frenz, D., Liu, W., Verpy, E., Voegeling, S. and
                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 929)
                                                                                                                                                                                                                                                                                                                                        AF243504.1 GI:11991841
                                                                 2 (bases 1 to 929)
Cohen-Salmon, M., Fr
                                                                                                                    J. Biol. Chem. 275 (51), 40036-40041 (2000)
20568254
                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
                                  Direct Submission Submitted (09-MAR-2000) Biotechnologies, Institut Pasteur,
                                                                                                                                                                     Fdp, a new fibrocyte-derived protein related to MIA/CD-RAP, he in vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                     Petit, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGTGTATTTÄTGGATÄÄÄÄCTTTCTTÄÄGÄÄGTTGTGTGTGCGGATGÄGGÄGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ĠĠŖĠŖĠŦŦŦŦĠĠĠĊŦĠĠĊŔĠŦĠŦŦŦŔŦĠĠŦĠŔĊĊŔĊĊŔĠĠŔŦĠŔĠŔŦĠĠĠŔŔŦŦĠŦŔĠĠŦ
                                                                                                     0998416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02,C12R1:19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A61K39/395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088// (C12P21/
Roux, Paris 75015, France Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:10095"
68 c 111 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus sp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.3%;
                                                                   Frenz,D., Verpy,E., Voegeling,S. and Petit,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 294.8; DB 6;
Pred. No. 4.7e-83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107 t
                                                                                                                                                                                                                                                                                                                                                                            protein (Fdp) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                 complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                   ROD 26-DEC-2000
                                              25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
```

Tue

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
BD010821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                       FOCUS
                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                             TITLE
                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                 TAKEDA CHEMICAL INDUSTRIES LTD
OS MUS SD. (mouse)
PN JP 2001069994-A/22
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                   Novel polypeptide and DNA thereof
PI YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,
SHINICHI MOGI,
PI YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
                                                                                                                                                         Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H. Novel polypeptide and DNA thereof Patent: JP 2001059994-A 22 21-MAR-2001;
                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 947)
                                                                                                                                                                                                                                                                                                                    JP 2001069994-A/22.
                                                                                                                                                                                                                                                                                                                                  BD010821.1 GI:18639194
                                                                                                                                                                                                                                                                                                                                                      BD010821
                                                                                                                                                                                                                                                                                                                                                                                       BD010821
                                                                                                                                                     Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGTCAAGAAAGGGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĊĂTĠĠŦĠŤAŦŦŤĂŤĠĠĂŤĂĂĂĊŤŤŤĊŤŤĊŤĂĂĠĂĂĠŦŦĠŤĠŦĠĊĠĠAŦĠĂĠĠĄĠŦĠŦĠŦĊ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAAGGAGGCCACCAAGGAGATC 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGAA 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /Godon_start=1
/product="fibrocyte-derived protein"
/product="fibrocyte-derived protein"
/protein_id="AAG42355.l"
/db_xref="GI:11991842"
/db_xref="GI:11991842"
/translation="MARILILLICGLIVVICAGHGVFMDKLSSKKLCADEECVYTISLA
/translation="MARILILLICGLIVVICAGHGVFMDKLSSKKLCADEECVYTISLA
RAGEDYNAPDCRFIDVKGQQITVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
RAGEDYNAPDCRFIDEFFCE"
NLVKEGRVYQEATKEIFTTDLDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="Fdp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="Fdp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   156 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 294.8; DB 10; Pred. No. 4.8e-83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 220 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                               947 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      293 ₺
                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 929;
                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                  PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
```

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                SOURCE
                                                                                                           DEFINITION
ACCESSION
                                                                                                                                                   RESULT 11
BD093122
                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                밁
            REFERENCE
                                                                                             VERSION
                                                                                 KEYWORDS
                                                                                                                                      Focus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                      ORGANISM
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                          185 GATGTCAAGAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                 125 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                           365
                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                        245
                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G01N33/53/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02, PC A61P19/08,
                                                                                                                       Novel polypeptide and its DNA
                                                                                                BD093122.1
                                                                                                              BD093122
                                                                                 WO 0102564-A/22.
                                                                                                                                         BD093122
                                                                                                                                                                                                                                                                                                                       ĠĠŖĠŖĠŦŤŦŦĠĠĠĊŦĠĠĊŖĠŦĠŦŦŦŔŦĠĠŦĠŖĊĊŖĊĊŖĠĠŖŦĠŔĠŔŦĠĠĠŖŔŦŦĠŦŖĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                     | GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                       AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 364
                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism='Mus sp. (mouse)'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10095"
_158 c 221 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus sp."
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89.3%;
                                                                                                GI:22638710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 294.8; DB 6
Pred. No. 4.8e-83;
                                                                                                                                         947 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          289 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
DEFINITION Novel polypeptide and its DNA.

ACCESSION

BD093122.1 GI:22638710

BD093122.1 GI:22638710

BD093122.1 GI:22638710

WO SUD2564-A/22.

MO SUD2564-A/22.

MUS SP.

ORGANISM

Mus SP.

ORGANISM

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

AUTHORS

TITLE

JOURNAL

TOPICAL

Novel polypeptide and its DNA

TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO

OGI, SHOICHI OKUBO, SHINICHI MCGI, YUKO NOGUCHI, KOJI YOSHIMURA,

HIDEYUKI TANAKA

OS Mus SP.

OMMENT

OS Mus SP.

11-JAN-2001

PP 11-JAN-2000

OS JUN-1999 JP 99P 186718

PR 30-JUN-1999 JP 99P 186718

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

PI MCGI,

P
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MMU243939
                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                   COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 308;
                                                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       yu yuko noguchi,koji yoshimura,Hideyuki Tanaka
c C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
A61K38/17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                Submitted (20-JUL-1999) Rendtorff N.D., Department of Medical Genetics, Institute of Medical Biochemistry and Genetics, Blegdamsvej 3, 2200 Copenhagen N, DENMARK Related sequence: AJ242552.
                                                                                                                                                                                                                                                                                                                                          melanoma inhibitory activity-like protein; Mial Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus mRNA for melanoma
                                                                                                    2 (bases 1 to 958)
Rendtorff, N.D.
                                                                                                                                                                    polymorphism that abolishes translation Genomics 71 (1), 40-52 (2001)
                                                                                                                                                                                                         Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent
                                                                                                                                                                                                                                                          Rendtorff, N.D., Frodin, M., Attie-Bitach, T., Vekemans, M. and
                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                 AJ243939.1 GI:12619174
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MMU243939
                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                       (Mial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 124
                                                                                                                                                           21100875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCAACGAGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĠĠĀĠĀĠŦŤŦŦĠĠĠĊĬĠĠĊĀĠĬĠŤŦŦĀĬĠĠĬĠĀĊĊĀĊĊĀĠĠĀŤĠĀĠĀĬĠĠĠĀĀŦŦĠŦĀĠĠĨ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAITGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ccaaccacgararrgacrictrcrcraa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                     gene).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 294.8; DB 6
Pred. No. 4.8e-83;
0; Mismatches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                              bp mkNA ++----
ma inhibitory activity-like protein
                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ROD 29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
```

В S 밁 Ś

S

망 Ś 밁

Ş 밁 8

```
멍
                                                                                                                                                                                   Ś
                                                                                                                                                                                                               В
                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                   밁
                                                                           Ş
                                                                                                       밁
                                                                                                                               S
밁
                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sig_peptide
                                                                                                                                                                                                                                                                                                                          308;
                                                                                                                                                                              121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                          301
                                                                              241
                                                                                                                                   181
                                                                                                                                                             198
                                                                                                                                                                                                                                         61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                     1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                            GATGTCAAGAAAGGGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 257
                                                                             TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                       ĠĠĄĠĄĠŦŦŦŦĠĠĠĊŦĠĠĊĄĠŦĠŦŦŦŔŦĠĠŦĠĄĊĊĄĊĠŖĠŔŦĠŔĠŔŦĠĠĠĄĄŦŦĠŦĄĠĠŦ
                                                                                                                                GGGGCAFTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAFTGTGGGT 240
CCAACCACGGATATTGACTTCTTCTGTGAA 407
                           CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGGATC
                                                                                                                                                                                                                                                                                                                                                                                             273 a
                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="whole fetus"
/dev_stage="12.5 pc"
                                                                                                                                                                                                                                                                                                                                                                                                      /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24. .410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /map="79.4-80 cM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                              161 c
                                                                                                                                                                                                                                                                                                                                        93.3%;
                                                                                                                                                                                                                                                                                                                                                     89.3%;
                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                        Score 294.8; DB 1
Pred. No. 4.8e-83;
                                                                                                                                                                                                                                                                                                                                                                                                225 g
                                                                                                                                                                                                                                                                                                                                                         DB 10;
                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                        60
                                                                                                                 317
                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT 13
AF233333
                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                      SOURCE
                                                                                             REFERENCE
                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                            Pocus
                      TITLE
                                                                                                                                                                  ORGANISM
              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 1054)
Robertson, N.G., Heller, S., Lin, J.S., Resendes, B.L., Weremowicz, S., Denis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C. Denis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C. A novel conserved cochiear gene, CTOR: identification, expression
                                                                                                                                                                                                                                                               Mus musculus otoraplin mRNA, AF233333
analysis, and chromosomal mapping
                                                                                                                                                                  Mus musculus
                                                                                                                                                                                      Mus musculus (house mouse)
                                                                                                                                                                                                                                            GI:8927429
                                                                                                                                                                                                                                                                                                                 1054 bp
                                                                                                                                                                                                                                                                                          complete cds.
                                                                                                                                                                                                                                                                                                                      linear
```

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
                                                                                                                                                                                                               DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                 BD010830
                                                                                                                                                                                                                                                                                 RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                                                                                                                                ORGANISM
                                                              AUTHORS
               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Robertson,N.G., Heller,S., Lin,J.S., Resendes,B.L., Weremowicz, Denis,C.S., Bell,A.M., Hudspeth,A.J. and Morton,C.C. Direct Submission
                                                                                                                                                                                                                                                                                                                                       372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       192 GÁTGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                       301 CCAACCACGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252 GGAGAGTTTTGGGGTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genomics 66 (3), 242-248 (2000) 20334619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10873378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          μ
                                                                                                                                                                               BD010830.1 GI:18639203 JP 2001069994-A/31.
                                                                                                                      Rattus sp.
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Butheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                    BD010830
                                                                                                                                                                                                                              Novel polypeptide and DNA thereof.
                                               Ito, Y., Nishi, K., Ogi, K., (Yoshimura, K. and Tanaka, H.
                                                                                                               Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                     BD010830
               Novel polypeptide and DNA thereof Patent: JP 2001069994-A 31 21-MAR-2001;
                                                                                                 Rattus
                                                                                                                                                                   Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACCATTTCTCGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chregretatitatechtahabetitetatethaeabetitetetetetetakeabetitete 131
                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCÁGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                     татттессесадскасттесттасададскасдадтетасскаддадсскасскасдадатт зоо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ggagcarrcragacragcagrarrarragraaccaccagaargagargagaarragra
                                                                                                                                                                                                                                                                                                                                    ccaaccacgaratrgactrctrctgtgaa 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 296
                                                                                (bases 1 to 307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ed (10-FEB-2000) Pathology, Br
Street, Boston, MA 02115, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="otoraplin"
/protein_id="AAF82079.1"
/protein_id="AAF82079.1"
/db_xref="G1.8927430"
/db_xref="G1.8927430"
/translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
/translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
RAGEDYNAPDECFIONKGGQIYVVSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
NLVKEQRVYQEATKEIPTTDIDFFCE"
a 183 c 265 g 310 t
CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 294.8; DB 1
Pred. No. 4.8e-83;
                                                                       Okubo, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brigham and Women's Hospital,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10; Length 1054;
                                                                                                                                                                                                                                                            DNA
                                                                          Mogi,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                          Noguchi, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          251
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                        BD093131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                         RESULT 15
                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                VERSION
                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 295;
                                                                                          JOURNAL
                                                                                                          TITLE
                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                 187 GGGGCÁTTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 ААТСТСААСАЛАССССАССАССТАТСТТАТТССААССТССТААСАСААААТССАСТ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PC C071
G01N33/
PC C12
CC
CC
FH Key
FT Sou
FT /or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SHINICHI MOGI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 caregreratritaregatadactrictrictadeaactrictererectadeacacterere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A61P19/08,
 HIDEYUKI TANAKA
OS Rattus sp. (
PN WO 0102564-A
PD 11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                    Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                              BD093131
Novel polypeptide and its DNA.
BD093131
                                                            Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Nogucia, N., Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
YasuaKI ITO, KAZUNORI NISHI, KAZUHIRO TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                  Rattus sp.
                                                                                                                                                                                                                                               BD093131.1 GI:2
WO 0102564-A/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tattitecechácháctiggitagaságéaacgagtataceaggaggeéteketaággagat
                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTCGTTAGAGAGCAACGAGTGTACCAGGA-GGCCACCAAGGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus sp. (rat)
JP 2001069994-A/31
21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C07K14/47,C07K16/18,C12N1/21,C12N5/10,G01N33/15,G01N33/50, PC
N33/53//
                                                                                                                                                       (bases 1 to 307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism='Rattus sp. (in Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
Rattus sp. (rat)
WO 0102564-A/31
11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bī
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="genomic DNA
/db_xref="taxon:10118"
56 c 90 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Rattus sp."
                                                                                                                                                                                                                                                                  GI:22638719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (rat)
                                                                                                                                       Ogi,K., Okubo,S., Mogi,S., Noguchi,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 281.6; DB 6; pred. No. 7.8e-79;
                                                                                                                                                                                                                                                                                                                 307 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (rat)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77
                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                بر
--
                                                                                                                                                                                                                                                                                                                        PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66
                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
Search completed: December 30, 2003, 04:08:00 Job time : 1045 secs
                                                                                                                                                                                                                                                                                                                                              Query Match 85.3%; Score 281.6; DB 6; Length 307; Best Local Similarity 98.3%; Pred. No. 7.8e-79; Matches 295; Conservative 0; Mismatches 4; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                          PI MOGI,
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PC C12N15/12, C12N5/10, C12P21/02, C07K14/47, C07K16/18, A61K45/00, PC
A61K38/17,
PC A61K39/395, A61K49/16, A61P19/02, A61P19/08, A61K31/7088//(C12P21/PC 02, C12R1:19)
CC Location/Qualifiers.
FH Key Coling/Outlifiers
                                                                                                                                                                                                                                  PR
PR
                                                                                                                                                                                                                                                                                        1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
56 c 90 g
                                                                                                                                                                                                                                                                                                                                                                                                                                   77 t
                                                                                                                                                                                                                                                                                                                                                              1; Gaps
```

멍 S 밁 8 밁 Ś

밁 Ś

Ş 밁

Tue Dec

```
OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                              Result
                                                                No.
                                                                                                                              pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
294.8
294.8
294.8
294.8
                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December 30, 2003, 01:02:37; Search time 1098.31 Seconds (without alignments) 7302.593 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-48
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 catggcatgtttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22781392 seqs, 12152238056 residues
                                                                                                                                                                                                                                                                                                                                                                                   9:
10:
11:
12:
13:
15:
                                                                 Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
89.3
89.3
89.3
                                                                                                                                                                                      em_estro:*
gb_est1:*
gb_est2:*
gb_est2:*
gb_est4:*
gb_est4:*
gb_est4:*
gb_estfun:*
em_gss_inv:*
em_gss_inv:*
em_gss_pln:
em_gss_pln:
em_gss_pln:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_estba:*
em_esthum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estov:*
em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estmu:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_estin:*
 398
488
514
534
                                                                       ij
 BQ570035
BQ564607
BQ568498
BQ564134
                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45562784
       BQ570035 gi143b10.
BQ564607 gi19h02.y
BQ568498 gi109c02.
BQ564134 gi11d01.y
                                                                         Description
```

			- (n		വ			C	()	()						••																									
i	n d	> i	۱ ۵	42	41	40	39	ა 8	37	36	35	ω 4	ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	14 180	17	ο (1	7 1	4	ן ני	12	1 7	<u>.</u>	ه م	90	7	0	_{رس}	
	63.										80.2				\circ	N	4	~	~	8	21	21	22	24	26	8	160.6	82	ၕ	_ ;	216.8	5	69	Ŋ	80	ם ע	94	94.	94.	294.8	94.	
	19.2	19.2	19.2	19.2	19.2	19.6	20.8	21.5	21.8	8.12	24.3	24.3	24.3	26.4	27.5	28.1	28.5	29.5	29.6	30.4	36.7	36.8	37.2	37.6	38.3	38.3	48.7	55.0	55.6	57.0	65.7	76.6	81.7	83.0	84.9	88.8	89.3	89.3	89.3	89.3	89.3	
	515	8	ဗ	73	3	ŭ	4,	Ū	4		·	ıω	0	w	σ	0	9	œ	_	œ	9	00	·	2	0	677	7	w	O	٠.	٠.	٠.	-	_	•	-			_			
	13	7	12	14	· -	4 1	-4 t	· }-	· -		. u	v	٠,	14	13	1	13	13	<u>,</u>	٠	v	10		9	1	ü	10	13	13	L U	13	13	13	ü	13	13	10	13	W	13	L)	;
	BQ89273	BM85647	BM71593	CA43340	100	110110	CB/903/	CA10000		200000000000000000000000000000000000000	AL / 1 / 202	AL/1/900	7 7 7	(1)360404	4 6	10		4 0	2 4		AWUZJJAS	BB64/920	AL925854	AA222/9/	200		100	, 01				-	-		-				·	BQ564944		
	US92/34 AGENCOON	MODELLA V. POTOT.	056479 K-FST014	M715936 UI-E-EJO	A433401 U	F691795 60224834	ά	796570 AMGNNUC	370333 65	509768 UI-R-FS	Q208982 UI-R-DY	7179	717905 AL717905	567219 qi82h08.	360	564457 gil7al2.	569268 Gil25al2	563	444	(418)213	023324 df53d01	647928 BB6479	854 AL925854	22797 mv77b12.	047965 Mus musc	0563227 gi01a05	236443 14464	0566776 gi69b07	0568785 gill4f0	1748241 CH3#01E	DE 65179 0132807.	33622 BY23262	0567343 g188d08	65411 01376	056693 017309	ORKS637 gi42g03.	B611549 BB611549	0563768 Gi06c09	3471 gi108g04	0564944 qi27q09	0569741 gil35f01

الوداد الإستحواد والدوارية

a

იიი

ი ი

ALIGNMENTS

50/ Tel Tel Fax Ema Pla Pla Sec	JOURNAL Unp COMMENT Con Str	REFERENCE 1 AUTHORS KAC TITLE EST	ACCESSION BQ57 VERSION BQ57 KEYWORDS EST. SOURCE Mus ORGANISM Mus	Z
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599 Fax: 301-402-1765 Email: kacharb@nidcd.nih.gov Plate: 143 row: b column: 10 Seq primer: M13RP1 reverse primer (ABI).	Onbet of realing Unpublished as Contact: Kachar,B. Contact: Kachar,B. Structural Cell Biology National Institute of Deafness and other Communication Disorders National Institute of Deafness and other Communication	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Muri	EQ570035 GI:21473352 BQ570035.1 GI:21473352 EST. Mus musculus (house mouse) Mus musculus (house mouse) Fukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Fukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	BQ570035 398 bp mRNA linear EST 19-JUN-2002 gi143b10.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi143b10 5', mRNA sequence.

```
Query Match
Best Local Similarity
                          Matches
                            308;
1 CATGGCATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                            Conservative
                                             93.3%;
                                 0
                                             Score 294.8; DB 13; Length 398; Pred. No. 2.1e-81;
                                    Mismatches
                                          0; Gaps
```

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            epithelium was carefully dissected out of the movine total RNA was extracted using the micro Fasttrack kit Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and to manufacturer's instructions kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold Loning kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold Cloning kit (catalog # 237612), both Giagapack III Gold and, can kit piu DNA polymerase and knase H. Complementary synthesis was such provided with DNA was blunt ended with Pfu DNA polymerase and transcripted with DNA was blunt ended with Pfu DNA polymerase. Ilgated with DNA was blunt ended with Pfu DNA polymerase and digested with DNA was blunt ended with Pfu DNA polymerase and digested with DNA was blunt ended with Pfu DNA polymerase and transcripted for converse paramacia Size sequentially size fractionated with Xho I. The cDNA was sequentially size fractionated with the Uni-ZAP XR vector, which had been predigested with Giapapak EcoR I and Xho I. The phagemid was packaged with Giapapak EcoR I and Xho I. The phagemid was packaged with Giapapak EcoR I and Xho I. The phagemid was setimated to be 11,100,000 yield of the phage library was estimated to be 11,100,000 yield of the phage library was estimated be be 11,100,000 yield of the phage (catalogue # 211203) was adopted resistance helper phage (catalogue # 211203) was adopted for paramacia, proverse primer (pagapakacagarangacc) and 25% universal M13 reverse primer (pagapakacagarangacc) and 25% universal M13 reverse primer (pagapakacagarangacc) and 25% universal M13 revers
                                                                                                                                                                                                                                                                            105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript; The
/clone_stab="Mouse Organ of Corti, Vector; pBluescript; The
/note="Organ: Organ of Corti, Vector; pBluescript; The
/note="Organ: Organ of Corti (OC) was fine dissected from a total of 386
Organ of Corti (OC) was fine post-natal (p) day 5; 72
OC as follows: 102 samples from post-natal (p) day 5; 72
OC as follows: 102 samples from ps; 18 from p; 20 from p10;
from p6; 60 from p7; 46 from p8; 18 from p3 animals by
14 from p12 and 24 from p13. After killing animals by
14 from p12 and 24 from p13. After killing animals by
15 from p12 and 25 from p13. After killing animals by
16 from p12 and 27 from p13. After killing animals by
17 from p12 and p13 from p13. After killing animals by
18 from p12 and p13 from p13. After killing animals by
19 from p12 and p13 from p13. After killing animals by
19 from p12 and p13 from p13. After killing animals by
10 from p13 and p13 from p13. After killing animals by
11 from p13 and p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from p13 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were Biosystems on MJ Tetrad thermal cyclers (MJ Research, performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary Waltham, MA), and popt polymer (Applied Biosystems, Foster sequencers using popt polymer (Applied Biosystems, Foster Sequencers using popt polymer (Applied Biosystems, Foster Sequencers using popt polymer (Applied Biosystems, Foster Sequencers using popt polymer (Applied Biosystems, Foster Sequencers) and 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
                                                                                                                                                                                                                                                                       genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; have in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
10% to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 to 108 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
BQ564607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           127 TÁTÁCTÁTTTCTCTGGGÁÁGÁGGÁCÁGGÁÁGÁTTACAÁTGCCCCAGACTGTÁGGTTCÁTC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187 GATGTCAAGAAÁGGGCÁGCÁGATCTÁTGTTTÁCTCCAAGCTGGTÁACÁGAÁÁACGGÁGCT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          367 CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 488 bp mRNA linear EST 19-JUN-200:
gil9h02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gil9h02 5', mRNA sequence.
BQ564607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ564607.1 GI:21467924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ggagcarrcragacragacagrarrrargaraaccaccagaargagargagaarraragar 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gángagtitttödöcitödchárfarrihárógitghcchcchaghitánghítódahhitárnágit 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Institute of Deafness and other Communication Disorders 50/42/9 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              plate: 19 row: h column: 02
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            татттессерасласттесттаслеваслассласствеселослессасствассластватт зоо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 488)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301-402-1765
                                                                                                                                 /sex= mare and remitable process.

/dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti; Vector: pBluescript; The
/clone_lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti (OC) was fine dissected from a total of 386
organ of Corti (OC) was fine dissected from p9; 20 from p10;
OC as follows: 102 samples from p8; 18 from p9; 20 from p10;
from p6; 60 from p7; 46 from p8; 18 from p9; 20 from p10;
from p12 and 24 from p13. After killing animals by
14 from p12 and 24 from p13. After killing animals bould
cervical dislocation followed by decapitation, the bulla
cervical dislocation followed by decapitation. The bony
was removed and opened in Leibowitz medium. The bony
and spiral ligament were removed and the sensory
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.

epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="gi19h02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 400
```

EST 19-JUN-2002

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                           301
                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
CCAACCACGGATATTGACTTCTTCTGTGAA 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGCGGATGAGGAGTGTGTC 120
                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                            GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                               GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGCATGTTYATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Kho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with Gigapak III Gold and, upon titration on XiI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 21120) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the CONCERTS(TM) plasmid purification kit (Invitrogen, Carlsbac, CA) as instructed by the manufacturer. ESTs from the 5' end of the CDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength Bigbye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). Sequencing reactions, Foster City, CA). Sequencing treation, 45% of genes have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 143 a. 135 g 127 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 294.8; DB 1
Pred. No. 2.4e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 488;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
```

밁 Ş B Ş 밁 Ş 밁

Ś 밁 Ş

```
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ568498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ568498 514 bp mRNA linear EST 19-JUN-2002 gi109c02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi109c02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: 109 row: c column: 02
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ568498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  National Institute of Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ568498.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 514)
/dev stage="male and remale"
/clone lib="Mouse Organ of Corti cDNA pBluescript; The /note="Organ: Organ of Corti; Vector: pBluescript; The organ of Corti (OC) was fine dissected from a total of 386 organ of Corti (OC) was fine dissected from a total of 386 organ of Corti (OC) was fine dissected from pp; 20 from p10; 14 from p5; 60 from p7; 46 from p8; 18 from p9; 20 from p10; 14 from p12 and 24 from p13 After killing animals by cervical dislocation followed by decapitation, the bulla was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlabad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA), uSA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was sprimed with bnA polymerase and transcribed using Moloney murine leukemia virus reverse transcribed using Moloney murine leukemia virus reverse transcribed with Sto I site. First strand synthesized with DNA polymerase and RNase H. Complementary DNA was bunt ended with Ftu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs was sendenced with Gigapak in the phagemid was packaged with Gigapak in the phagemid was packaged with Gigapak the phage library was estimated to be 11,100,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sex="male and female"
```

FEATURES

source

```
BASE COUNT
                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ564134 534 bp mRNA linear EST 19-JUN-200.
gilld01.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gilld01 5', mRNA sequence.
                                       Contact: Kachar,B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1. (bases 1 to 534)
                                                                                                                                                                                \mathtt{EST} analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ564134
BQ564134.1 GI:21467451
                                                                                                                                                                                                                                                                              Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
National Institute of Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAACCACGGATATTGACTTCTTCTGTGAA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using Pops polymer (Applied Biosystems, Foster City, CA).

The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 12% are uncharacterized ESTs and 20% are unidentified."

47 a 85 c 143 g 139 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGACC) and 25% universal M13 reverse primer (CAGGAAACAGGTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 294.8; DB 13; Length 514; Pred. No. 2.4e-81; 0; Mismatches 22; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
```

Ś D S 멍 Ś B Ś 밁 Ş B

COMMENT

BASE COUNT

TITLE

SOURCE

VERSION

BQ564134

ORIGIN

```
Email: kacharb@nidcd.nih.gov
plate: 11 row: d column: 01
Seq primer: M13RP1 reverse primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel: 301-402-1599
Fax: 301-402-1765
epithelium was carefully dissected out of the modification of the modified (Catalog # K1593-02; Invitrogen, Carlabad, CA), according to manufacturer's instructions, Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector kit (Catalog # 23721; Stratagene) and Uni-Zap XR vector bed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using philosophy murine leukemia virus reverse transcribed with Stratagene; primer and transcribed using philosophy murine leukemia virus reverse transcribed using philosophy murine leukemia virus reverse transcribed using philosophy murine leukemia virus reverse and digested with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated with EcoR I and Xho I. The cDNA was then directionally ligated to the Uni-Zap XR vector, which had been predigested with EcoR I and Xho I. The phagenid was packaged with Giagapak EcoR I and Xho I. The phagenid was packaged with Giagapak EcoR I and Xho I. The phagenid was packaged with Giagapak EcoR I and Xho I. The phagenid was packaged with Giagapak EcoR I and Xho I. The phagenid was packaged with Giagapak EcoR I and Xho I. The phagenid was packaged with Giagapak EcoR I and Xho I. The phagenid was packaged with Giagapak EcoR I and Xho I. The phagenid was packaged with the phage Ilhary was adopted to resident highly the phage Ilhary was adopted to resident highly the phage Ilhary was adopted to resident highly the phage Ilhary was adopted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
organ of Corti (OC) was fine dissected from a total of 386
organ of Corti (OC) was from post-natal (P) day 5; 72
OC as follows: 102 samples from post-natal (P) day 5; 72
from p6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from p12 and 24 from p13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  type="mRNA"
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 308; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 89.3%;
Best Local Similarity 93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 AATGTCAAGAAAGGCCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              560 bp mRNA linear EST 19-JUN-2002
gil35f01.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gil35f01 5', mRNA sequence.
BQ569741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate: 135 row: f column: 01
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ569741.1 GI:21473058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGAA 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hearing
/dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cottor: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from p0; 60 from p0; 46 from p8; 18 from p9; 20 from p10;
14 from p12 and 24 from p13. After killing animals by
14 from p12 and 25 from p13 to p10; 10 from p10; 10 from p10; 10 from p10; 10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p10 from p1
                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:10090"
/clone="gi135f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                             'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          type="mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 294.8; DB 1
Pred. No. 2.5e-81;
0; Mismatches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13; Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

epitnelium was Carefully unsected on or the modicion Total RNA was extracted using the micro fastirack kit (catalog # K1593-02; Invitrogen, Carlabad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721; Stratagene) and Uni-Zap XR vector kit (catalog # 23721; Stratagene) and Uni-Zap XR vector kit (catalog # 23721; Stratagene) and Uni-Zap XR vector kit (catalog # 23721; Stratagene) and Uni-Zap XR vector kit (catalog # 23721; both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly; 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukenia virus reverse transcribeds with follow the follow as sequentially size fractionated with Moloney murine leukenia virus reverse transcribed with EcoR I adapters in the presence of ligase and digested with EcoR I adapters in the presence of ligase and digested with EcoR I adapters in the presence of ligase and digested with EcoR I and Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sepado (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) oclumns to enrich for cDNAs greater than 400pp and 1000 bp respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with the Uni-ZAP XR vector, which had been predigested with Giapapak II Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recipied with EcoR I and Xho I. The phagenid was packaged with Giapapak to rescue plasmid DNA from the phages. Upon plating of the rescued library, and growth plate. Plasmid DNA was adopted to rescue plasmid DNA clones were generated with the Carlsbard CNA) as instructed by the manufacturer. ESTs from the phages. Upon plating of the universe universe combinators 160 a capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. was removed and opened in Leibowitz medium. The bony 93.3%; Score 294.8; DB 1 Pred. No. 2.6e-81; DB 13; Length 560;

240 181 180 120 121 308; 61 0 1 CATGGCATGTTTATGGATAAACTTTTCTTAAGAAGTTGTGCAGATGAGGAGTGTGTC 60 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTCTC 119 GGAGAGTTTTGGGCTGGCAGTGTTTÄTGGTGACCACCÁGGÁTGAGÁTGGGAÁTTGTAGGT GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC Conservative 0 Mismatches 22; Indels 0 239

Ś 밁 Ś

BASE COUNT

Query Match **Local**

Similarity

0

Ş 밁

망 Ş

밁 Ś

```
RESULT 6
BQ564944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 608 bp
gi27g09.yl Mouse Organ of Corti
clone gi27g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 608)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Structural Cell Biology
National Institute of Deafness and other Communication Disorders
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ564944.1 GI:21468261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: 27 row: g column: 09
Seg primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ccaaccaceeararreactretrereaa 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus (house mouse)
/dev_stage="post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript; The
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The
/note=Torgan: Organ of Corti; Vector: pBluescript; The
organ of Corti (CD) was fine dissected from a total of 386
Organ of Corti (CD) was fine dissected from p9; 20 from p10;
14 from p12 and 24 from p13. After killing animals by
14 from p12 and 24 from p13. After killing animals by
15 cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA). according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and vii-Zap XR
vector kit (catalog # 237211, Stratagene) and vii-Zap XR
vector kit (catalog # 237211, Stratagene) and vii-Zap XR
vector kit (catalog # 237211, Stratagene) and vii-Zap XR
vector kit (catalog # 237211, Stratagene) and vii-Zap XR
vector kit coloning kit (catalog # 237612), both
vector kit coloning kit (catalog #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA pBluescript Mus musculus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 19-JUN-2002
```

밁

밁

BQ568471 LOCUS

630 bp mRNA linear EST 19-JUN-2002 gi108g04.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi108g04 5', mRNA sequence.

REFERENCE

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 630)

KEYWORDS VERSION ACCESSION DEFINITION

BQ568471.1 GI:21471788

ORGANISM

Mus musculus

musculus (house mouse)

RESULT

Ś 밁 S В á

```
Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
301
                                                                                        307
                                                                                                                                                              241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGACGCCAAGGAGATT 300
                                                                                                                                                                                                                                                                     247
                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                      187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 89.3%;
Similarity 93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ggggcarrcrgggcagrgrrrarggrgaccaccaggargagargagargggaarrgrgggr
CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 366
                                                                                                                                                                                                                                                                     GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and contech chroma spain-wove traditions. The columns to enrich for cDNAs greater than 400bp and 1000 bp respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak II Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exhasist Interference recombinants. Stratagene's Exhasist Interference rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well, 2 ml growth plate. Plasmid DNA was grown in 96-well plate. Plasmid DNA was grown in 96-well plate. Plasmid DNA was grown in 96-well plate. Plasmid DNA was grown in 96-well plate. Plasmid DNA was grown in 96-well plate. Plasmid DNA was grown in 96-well plate. Plasmid DNA clones were generated with the universal M13 reverse primer (CAGGANACAGCTATGACC) and 25% grown in 96-well plate. Plasmid DNA chamilator well plate. Plasmid DNA chamilator with the grown plate plate plate plate plate plate. Plasmid DNA chamilator plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate plate p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA) and analyzed on 3700 automated capillary sequencers using pop5 polymer (Applied Biosystems, Foster sequencers using pop5 polymer (Applied Biosystems, Foster city, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of 1.4% 11-50 and 0.6% 51-150. As to gene function; 23% genes are present in GenBank and have know function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Clontech Chroma Spin-1000 (Clontech, Palo Alto,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 294.8; DB 13; Length 608; Pred. No. 2.7e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

ORIGIN

BASE COUNT

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: 108 row: g column: 04
Seg primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301-402-1765
                                                                                                                                                                                                                                                                                                                        primed with the linker primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMILV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNAse H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with kNo I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml grownth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbada, CA) as instructed by the manufacturer. ESTs from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
                                   Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, WA), and analyzed on 3700 automated capillary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was reversed with the linker system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (Catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and
sequencers using POP5 polymer (Applied Biosystems, Foster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone="gi108g04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   db_xref="taxon:10090"
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ563768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            367 CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGAGATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          127 TATACTATTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                             Structural Cell Biology
National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ563768 684 bp mRNA linear EST 19-JUN-200 gi06c09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi06c09 5', mRNA sequence.
                                                                                                                                                                                    Plate: 06 row: c column: 09
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                              EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 684)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ563768.1 GI:21466749
                                                                                                                                                                                                                                                          Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." a 111 c 167 g 174 t
/db_xref="taxon:10090"
/clone="gi06c09"
/sex="male and female"
/dev_stage="Post natal day
                                                                                           /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                      1. .684
                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89.3%;
93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 294.8; DB 13; Pred. No. 2.7e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
```

5 to 13"

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                              308;
                                                                                                                                         61 TATACCATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                67 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                       TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                                                                                                                                                                                                       CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTGC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 194
                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            catalog # Ki53-02; Invitrogen, Carlibad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721). Stratagene) and Uni-Zap XR vector kit (catalog # 23721). Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (la Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 up mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and strand wath EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagenid was packaged with Gigapak III Gold and, upon tirtation on XLI Blue MRP cells, the yield of the phage library was estimated to be 11,100,000 resistance helper phage (Stratagene's ExAssist Interference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on M Teurad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA).

The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96 (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CACGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cervical dislocation followed by decapitation, the bulla was removed and opened in Leibowitz medium. The bony capsule of the cochiea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 294.8; DB 13; Length 684; Pred. No. 2.9e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

B Ś 밁

FEATURES

Location/Qualifiers

```
RESULT 9
BB611549
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187 GÁTGTCAÁGAÁAGGCAGCAGATCTATGTTTACTCCAÁGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                               encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Yamanaka, I., Kiyosawa, H., Kondo, S., Saito, T., Shinagawa, A., Aizawa, K., Fukuda, S., Hara, A., Itoh, M., Kawai, J., Shibata, K., Arakawa, T., Ishii, Y. and Hayashizaki Y.

Mapping of 19032 mouse cDNAs on mouse chromosomes. J. Struct. Func. Genomics 2 pre, L72-L86 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: genome-res@gsc.riken.go.jp,

URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh
,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.

Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. . 10 (10), 1617-1639
genes. Genome Res. . 10 (10), 7. Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arakawa, T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hiramoto, K., Hori, F., Ishii, Y., Ito, M., Kawai, J., Konno, H., Kouda, M., Koya, S., Matsuyama, T., Miyazaki, A., Nomura, K., Ohno, M., Okazaki, Y., Okido, T., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Takeda, Y., Tanaka, T., Toya, T., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 696)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB611549 RIKEN full-length enriched, 13 days embryo head Mus musculus cDNA clone 3110083012 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BB611549
                              Please visit our web site (http://genome.gsc.riken.go.jp) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIKEN Mouse ESTs (Arakawa, T., et al. 2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BB611549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hayashizaki,Y.

RIKEN integrated sequence analysis (RISA) system--384-format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
e mouse tissues
                                                                                                                                                                                                                                                                                                                                                              Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                    Y. and Hayashizaki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                               Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TLR.N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246
```

COMMENT JOURNAL

source

```
REFERENCE
                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                             BQ565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                    AUTHORS
                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                474 bp mRNA linear EST 19-JUN-200: gi42g03.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi42g03 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78
EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                    Kachar, B.
                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                               BQ565637.1 GI:21468954
                                                                                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACCATTTCTCTGGCAAGAGCACAGGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 137
                                                                  mmalia; Eutheria;
(bases 1 to 474)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       was cleaved with XhoI and SstI."
122 c 176 g 194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Site_1: XhoI; Site_2: SstI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="head"
/dev_stage="13 days embryo"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="3110083012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone_lib="RIKEN full-length enriched, 13 days embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 294.8; DB 10; Length 696; Pred. No. 2.9e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22; Indels 0;
                                                                                                                                                                                                                                                                                                     EST 19-JUN-2002
                                                                                             Murinae; Mus.
```

В

S 밁 Ş Ś 뭕 Ś B Ś

밁

```
Plate: 42 row: g column: 03 Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Structural Cell Biology
National Institute of De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Kachar, B
Structural Cell B:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: 301-402-1765
ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with ECOR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XhI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual CDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on M1 Tetrad thermal cyclers (MN Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA).

The frequency distribution of the library is as follows: 72% of genes have I copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Glgapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase. ligated with DNA polymerase and strand was synthesized with under the property of ligated with DNA polymerase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni Zap XR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
C as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone="gi42g03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        type="mRNA"
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ566932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 307;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      128 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       368 CCAACCACGGATATTGACTTCTTCTGTGAA 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68 CATGGTGTATTTATGGATAAACTTTCTTAATAAGTTGTGTGCGGATGAGGAGTGTGTC 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             409 bp mRNA linear EST 19-JUN-200: gi73g09:y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi73g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                     Plate: 73 row: g column: 09
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                   Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST analysis of gene onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ566932.1 GI:21470249
                                                                                                                                                                                                                                                                                                                      Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                      50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                             National Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĠĠAĠAGTTTTĞĠĠĊTĠĠĊĀĠŦĠŦTTATGGTGACCACCAGGATGAGATGGGAATTĞTAĞGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                            301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are unidentified." a 78 c 131 g 120 t
/dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti cDNA pBluescript"
/otone="Organ: Organ of Corti, Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of
                                                                                         /db_xref="taxon:10090"
/clone="gi73g09"
/sex="male and female"
                                                                                                                                                           /organism="Mus musculus"
/mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 293.2; DB 13; Pred. No. 7.4e-81;
                                                                                                                                                                                                                                                                                                                                                                                                             Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
```

OC as follows: 102 samples from post-natal (P) day 5; 72 from P9; 60 from P0; 46 from P8; 18 from P9; 20 from P10; 14 from P9; 20 from P10; 14 from P9; 20 from P10; 14 from P9; 20 from P10; 14 from P9; 20 from P10; 14 from P9; 20 from P9; 20 from P9; 20 from P9; 20 from P9; 20 from P9; 20 from P9; 20 from P9; 20 from P10; 40 fro

Ş 밁 Ş 片 Matches 305; Best Local Query Match 120 CAATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGC 141 CTATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCAT 60 81 Similarity CTATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGGCTGTAGGTTCAT CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCTTGATGAGGAGTGTGT CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGCA-GATGAGGAGTGTGT Conservative 84.9%; <u>.</u> Score 280.2; DB 13; Pred. No. 8.1e-77; Mismatches 23; Indels Length 1; Gaps 140 179 200

CGATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGC

260

BASE COUNT ORIGIN

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ565411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           381 CCCAACCACGCTATTGACTTCTTCTGTG 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300 TCCAACCACGGATATTGACTTCTTCTGTG 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180 TGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGG 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            490 bp mRNA linear EST 19-JUN-200 gi37b12.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi37b12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: 37 row: b column: 12
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ565411.1 GI:21468728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ565411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGG 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGAT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTATTTCCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGAT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 490)
                 was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA olymprase and DNAse W Completer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="Post natal day 5 to 13"
/dev_stage="Post natal day 5 to 13"
/clone lib="Mouse Organ of Corti Octi: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
synthesized with DNA polymerase and RNase H. Complementary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="gi37b12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 19-JUN-2002
```

VERSION KEYWORDS SOURCE

Mus musculus (house mouse) BQ567343.1 GI:21470660 ACCESSION DEFINITION

BQ567343

BQ567343 604 bp mRNA linear EST 19-JUN-200 gi88d08.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi88d08 5', mRNA sequence.

EST 19-JUN-2002

RESULT 13 BQ567343 LOCUS

441

Ş 밁 S 밁 Ş 밁 S

321 241

```
Matches 295; Conservative
                                                              301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                      181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261 GATGTCAAAAAAGGGCAGCAAATCTATGTTTACTCCAAGCTGGTAACAAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141 CATGGGGTATTTATGGATAAACTTTCTTCTAAAAAATTGTGTGCGGATAAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
CCAACCACGGATATTGACTTCTTCTGGGAA 470
                                                                                                                                                             TATTTCCCCACCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                        TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XII Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescue dlibrary, individual cDNA clones were selected and grown in 96 well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal Ml3 reverse primator secuencing chemistry (Applied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 91 a 77 c 109 g 112 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA was blunt ended with Pfu DNA polymerase, ligated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.0%;
89.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 8e-75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13; Length 490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

ORIGIN BASE COUNT

Query Match Local

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 88 row: d column: 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                /dev_stage="Post matal day 5 to 13"
//dev_stage="Post matal day 5 to 13"
//clone lib="Myouse Organ of Corti (DNA pBluescript"
//note="Organ: Organ of Corti, Vector: pBluescript; The
//note="Organ: Organ of Corti, Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA); according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Clonning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
pinned with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcribed with
EcoR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA)
columns to enrich for cDNAs greater than 400b and 1000 bp
. respectively. The cDNA was sequencially ligated to
the Uni-Zap XR vector, which had been predigested with
EcoR I and Xho I. The phagemid was packaged with 61gapak
III Gold and, upon titration on XLI Blue MRF cells, the
resistence hellowed the formal counter of the phage of the phage of the phage of the phage of the phage of the phage of the phage of the 
                                                                                  resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from
the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="gi88d08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
```

ORIGIN BASE COUNT Matches 281; Conservative Best Local Query Match 121 271 CGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACCACGGATATTGACTTCTTCTGTGAA 330 181 GACCACCAGGATGAGATGGGAATTGTAGGTTATTTCCCCAGCAACTTGGTGAAGGAGCAG 240 211 GACCACCAGGATGAGATGGGAATTGTGGGTTATTTCCCCCAGCAACTTGGTTAGAGAGCAA 270 241 CGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGACTTCTTCTGTGAA 300 151 TATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGT 210 61 91 GACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGCAGATCTATGTT 150 31 AAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAA 90 1 AAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAA 60 Similarity GATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTT 120 TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTTGGGCTGGCAGTGTTTATGGT 180 178 a Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 81.7%; Score 269.6; DB 13; Length 604; 93.7%; Pred. No. 2.2e-73; 0; Mismatches 19; Indels 0

Ś 뭉 á

밁 ફ 밁 FEATURES

COMMENT

JOURNAL TITLE REFERENCE

ORGANISM

BY232622 RESULT 14

mRNA

EST 10-DEC-2002

ACCESSION DEFINITION rocus ERSION BY232622 RIKEN full-length enriched, adult inner ear Mus musculus cDNA clone F930026J20 5', mRNA sequence. BY232622

SOURCE **EYWORDS** ORGANISM BY232622.1 GI:26413732 Mus musculus (house mouse)

REFERENCE

AUTHORS

Eukaryota; Metazoa; Mammalia; Eutheria; Mus musculus (bases 1 to 365) Eutheria; Rodentia; Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Hume, D.A., Ouackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Dulake, J.A., Bradt, D., Brusic, V., Chothia, C., Corbani, L.E., Cousins, S., Dalla, E., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gaasterland, T., Garibold, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I.J., Jarvis, E.D., Kanal, A., Kurochkin, I.V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R., Maltais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W. J., Pertea, G., Pesole, G., Petrovsky, N., Pillai, R., Pontius, J.U., Oi, D., Ramachandran, S., Ravasi, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M.S., Teasdale, R.D., Tomita, M., Verardo, R., Wagner, L., Wahlestedt, C., Wang, Y., Walls, C., Wilming, L.G., Winshaw-Boris, A., Yanagisawa, M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., M., Sakazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Aizawa, K. Okazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S.,

strength BigDye terminator sequencing chemistry

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                  Matches 266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                              61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                        1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Alzawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S., Hirozane
Alzawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S., Hirozane
T., Imotani, K., Ishi, Y., Itoh, M., Kawai, J., Konno, H., Miyazaki, A.,
Murata, M., Nakamura, M., Nomura, K., Numazaki, R., Ohno, M., Sakai, K.,
Murata, M., Nakamura, M., Nomura, K., Shibata, K., Shiraki, T., Tagami
Sakazume, N., Sasaki, D., Sato, K., Shibata, K., Shiraki, Y. Direct
M., Waki, K., Watahiki, A., Muramatsu, M. and Hayashizaki, Y. Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 420,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tissues were provided by Kirk W. Beisel (Boys Town National Research Hospital 555 North 30th Street Omaha, NE 68131 USA) whose assistance we gratefully acknowledge. Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prepare mouse tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Computer-based methods for the mouse full-length cDNA
                                                                                 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                                                                                                                                                                                                                                            CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 137
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dev_stage="adult"
/clone_lib="RIKEN full-length enriched, adult inner ear"
60 c 110 g 98 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="inner ear"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /strāin="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="F930026J20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      563-573 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                       76.6%;
92.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _type="I
                                                                                                                                                                                                                                                                                                                                                                                                  Score 252.8; DB 13; Pred. No. 3e-68; 0; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                      22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

Ś 밁 Ś 밁 Ş

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ565179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 TATTTCCCCAGCAACTTGGTTAGAGAGCGACGAGTGTACCAGGAGGCC 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     258 GGAGAGTTTGGGGCTGGCAGTGTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 485 bp mRNA linear EST 19-JUN-200.
gi32a07.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gi32a07 5', mRNA sequence.
BQ565179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: 32 row: a column: 07
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 485)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ565179.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev stage="Post natal day 5 to 13"
//dev stage="Post natal day 5 to 13"
//clone lib="Mouse Organ of Corti (DNA pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modicils.
                                                                                                                                                         Total RNA was extracted using the micro Fastrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MLV-RT) and 5-methyl dCTP. The second strand was (MMLV-RT) and 5-methyl dCTP. The second strand was
synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="gi32a07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 19-JUN-2002
```

```
Query Match 65.7%; Score 216.8; DB 13; Length 485; Best Local Similarity 93.0%; Pred. No. 7.1e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 227; Conservative
241 TGAA 244
                                                                                             327 TGAA 330
                                                                                                                                                                                                                                                                              267 GCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACCACGGATATTGACTTCTTCTG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             207 TGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTCCCCCAGCAACTTGGTTAGAGA 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   147 TGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTA 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            87 GGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTA 146
                                                                                                                                                                                          GCAGCGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGACTTCTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAAGATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTTACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGGGCTGGCAGTGTTTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             146 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAB greater than 400bp and 1000 bp / respectively. The CDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XII Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the CDNA clones were generated with the universal M13 reverse primer (PAGGAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank, but do not have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                180
```

BASE COUNT ORIGIN

Search completed: December 30, 2003, 06:07:18 Job time : 1099.64 secs

밁 Ś 밁 Ś 뮹 Ş В

181

121

61

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                         N_Geneseq_19Jun03:*
1: /SIDS1/gcgdata/gen
2: /SIDS1/gcgdata/gen
3: /SIDS1/gcgdata/gen
4: /SIDS1/gcgdata/gen
5: /SIDS1/gcgdata/gen
6: /SIDS1/gcgdata/gen
7: /SIDS1/gcgdata/gen
8: /SIDS1/gcgdata/gen
            IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    December 29, 2003, 22:01:01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2552756 seqs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 catggcatgtttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-48
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                           /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                        /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1980_DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-embl/NA1982.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
                                                                                                                                                                                                                                                                                                                         SIDS1/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (without alignments)
8132.484 Million cell updates/sec
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUM	
MARIES	
w	

8 249	6 281. 7 26	5 294.8	4 294.	3 294.	2 330		Result No. Score
		8 89.3					!
330	307 261	947	384	330	384	330	Query Match Length DB
21	22	22	22	22	22	22	BB
AAF59079	AAF59093 AAF59092	AAF59084	AAF59068	AAF59080	AAF59098	AAF59099	ID
Human MLP nucleoti	Rat MLP nucleotide	Mouse MLP nucleoti	Mouse MLP nucleoti	Mouse MLP nucleoti	Rat MLP nucleotide	Rat MLP nucleotide	Description

WPI; 2001-159271/16.

Tanaka H;

Yoshimura K;

			0 0 0 0	
4444 5443 1	4 7 7 8 C C C C C C C C C C C C C C C C C	32 32 33	223 223 24 26	11111111111111111111111111111111111111
	477.2 477.2 477.2 47.2		60000000000000000000000000000000000000	00000000000000000000000000000000000000
44444				77777777777777777777777777777777777777
1060 1060 1060	1060 1060 1060	1060 1060 1060	1 2 3 4 4 4 4 4 6 6 6 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	384 426 521 521 521 923 923
22222	0 0 0 0 0 0 0 0 0	2222 244 254	221222122 246322626	222222222222222222222222222222222222222
ABX78808 ABX75821 ABX77026 ABX16866 AAS46205	ACA59892 ACA60445 ACA63455 ABX99433 ABX99435 ACA05980	AAQ84055 AAF92140 ABS74460 ABL95738 ABL95749 ACA57963	AAAA 34 AAAA 4783 AAAA 4783 AAAA 4850 AAI 70083 AAD 18732 ABV 59229 ABV 59229 ABV 59229 ABV 59229 ABV 59229	AAF59065 AAS17583 AAR36341 AAR36341 ABL95740 ABL88251 ABK38271 ABK3571 AAR59028 AAR59083
PRO PRO DNA	encoding in human se encoding in color encoding in color encoding in color encoding in the encoding encoding encoding encoding encoding encoding encoding encoding encoding encoding encoding in the encoding enco	Amplified fragment Human PRO19670 CDN Human CDNA encodin Human angiogenesis Human PRO19670 CDN Human PRO19670 CDN	Sequence encoding Recombinant human Sequence encoding Melanoma inhibitor Human antisense ol Human prostate exp Sequence encoding Breast cancer rela	Human MLP nucleoti DNA encoding novel Human growth regul Human angiogenesis Human PRO9873 cDNA cDNA encoding huma Human EST-derived Human growth regul Human MLP nucleoti

ALIGNMENTS

```
RESULT 1
AAF59099
Itoh Y, Nishi K,
                                                                 30-JUN-1999;
                                                                                                                                                Rattus sp.
                                                                                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                   29-JUN-2000; 2000WO-JP04278
                                                                                                          11-JAN-2001.
                                                                                                                             WO200102564-A1
                                                                                                                                                                                                                    Rat MLP nucleotide sequence SEQ ID NO:48.
                                                                                                                                                                                                                                         23-APR-2001 (first entry)
                                                                                                                                                                                                                                                             AAF59099;
                                                                                                                                                                                                                                                                                 AAF59099 standard; DNA; 330 BP.
                                               (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                     inhibitor; ds.
                                                                 99JP-0186718.
                           ogi ĸ,
                           Ohkubo s,
                          Mogi S,
                          Noguchi Y,
```

P-PSDB; AAB69131.

```
RASSULT 2
AAF59098
ID AAFF
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZXGGGGXGX00000000X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         promoters and inhibitors for preventing or treating e.g. bone diseases
                                                                                                                                                                                                                                                                                                                           MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 330 BP; 91 A; 62 C; 91 G; 86 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 12; Page 107; 111pp; Japanese.
   30-JUN-1999;
                                                           29-JUN-2000; 2000WO-JP04278.
                                                                                                                      11-JAN-2001
                                                                                                                                                                                                                                             Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rat MLP nucleotide sequence SEQ ID NO:46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF59098 standard; DNA;
                                                                                                                                                                                                                                                                                                     inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    low-toxicity secretory cell function-regulatory protein and set DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGCATTCTGGGCCGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGCATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          쁑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 330;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.4e-100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           o
~:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

joint disease; cardiant; gene

inhibitor;

MLP; MIA; melanoma inhibitory activity; cancer; bone disease;

pathologic angiogenesis; diagnos: therapy; secretory cell function

diagnosis; antiinflammatory; function regulator; promoter;

Mouse MLP nucleotide sequence

SEQ ID

NO:25

Mus musculus

```
RESULT 3
AAF59080
XAXEXEXEXEXAXAX
XAXEXEXEXEXXXXX
                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      믕
                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Sim
Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases a well as pathologic angiogenesis. AAF59063 to AAF69093 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                   AAF59080
                                                                                                                                           23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 384 BP; 98 A; 72 C; 109 G; 105 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 13; Page 105-106; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-159271/16.
                                                                                                                                                                                                                                                                           355
                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                   295
                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                          235
                                                                                                                                                                                                                                                                                                                                                                                                                                                     175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115
                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                   standard; DNA;
                                                                                                                                                                                                                                                                           CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mogi
                                                                                                                                                                                                                                                                           384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.8e-100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Noguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>~</u>
                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174
```

0

294

```
AAF59068
XXXXXXXX
                                                                                                                                                               밁
                                                                                                                                                                                      Ś
                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                   ક
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Sig
Matches 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antinfilammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases well as pathologic angiogenesis. AAFS9063 to AAFS9122 to AAFS9132 represent sequences used in the exemplification of the present invention.
            Mouse MLP nucleotide sequence SEQ ID NO:10.
                                                                                              AAF59068 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 10; Page 98; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  promoters and inhibitors for preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; AAB69127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JUN-1999;
                                       23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 330 BP; 91 A; 60 C; 92 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200102564-A1
                                                                                                                                                               301
                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001-159271/16.
                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                low-toxicity secretory cell function-regulatory protein and DNA, applicable as drugs, in diagnosis and development ters and inhibitors for preventing or treating e.g. bone are
                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTC
                                                                                                                                                                                                                                                                                                                                                  AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nishi K,
                                                                                                                                                               CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                    GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                               GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                     TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                               TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000WO-JP04278
                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93.3%;
                                                                                              384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ohkubo
                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 294.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.7e-88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Noguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
t of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
```

```
Ś
                                                                                                                             밁
                                                                                                                                                                                          8
                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 384 BP; 98 A; 68 C; 111 G; 107 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 11; Page 93; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  promoters and inhibitors for preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB; AAB69125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                       Local
                              301
                                                               295
                                                                                           241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT
                                                                                                                             235
                                                                                                                                                                                          175 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                              121 AATGTCAAGAAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                          115
                                                                                                                                                           181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of ters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                        308;
                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                         55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Η,
                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                  CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                             GGAGAGTTTTGGGCTGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                              TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                         CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                       89.3%;
93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                       Score 294.8; DB 22;
Pred. No. 2.9e-88;
                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S, Mogi S,
384
                                                                                                                                                                                                                                                                                                                                                                                        22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  joint
                                                                                             300
                                                             354
                                                                                                                             294
                                                                                                                                                            240
                                                                                                                                                                                          234
                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                          174
                                                                                                                                                                                                                                                                                                                                                         60
```

0

AAF59084 ID AAF

AAF59084 standard;

밁

365

CCAACCACGGATATTGACTTCTTCTGTGAA 394

```
밁
                                                                 á
                                                                                                 밁
                                                                                                                            δ
                                                                                                                                                          밁
                                                                                                                                                                                  Ś
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                    S
             Ş
                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouse MLP nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cardiant; gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Safe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inhibitor; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 2; Page 100-101; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               promoters and inhibitors for preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                           Sequence 947 BP; 279 A; 158 C; 221 G; 289 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MIA; melanoma inhibitory activity; cancer; bone disease; t disease; pathologic angiogenesis; diagnosis; antiinflammatory; iant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of ters and inhibitors for preventing or treating e.g. bone and
              301
                                           305
                                                                    241
                                                                                                    245
                                                                                                                                                          185
                                                                                                                               181
                                                                                                                                                                                      121
                                                                                                                                                                                                                   125
                                                                                                                                                                                                                                                                                                                                      308;
                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                            65
                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nishi K,
                                                                                                                                                                                                                                               татассатттстстодосладаесаследалерастаслатесссодаетствестстве
                                                                                                                                                                                                                                                                            careereratitateeataaactitictiaaeaaetietetetetetetetete
                                                                                                                                                                                                                                                                                                       CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                      ANTGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                   TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
CCAACCACGGATATTGACTTCTTCTGTGAA
                                            TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 364
                                                                    TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                               GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                             GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ogi K,
                                                                                                     regectegeaetettategteaecaccacgatgagateggaattetaget
                                                                                                                                                                                                                                                                                                                                                    89.3%;
93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ohkubo
                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                    Score 294.8; DB 2
Pred. No. 4.3e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO:30
                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ູເກ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mogis,
                                                                                                                                                                                                                                                                                                                                                                   DB 22;
                                                                                                                                                                                                                                                                                                                                         22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Noguchi Y,
                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                      947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yoshimura
                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ~
                                                                                                                                                                                                                                                                                  124
                                                                                                                                     240
                                                                                                                                                                                            180
                                                                                                                                                                                                                         184
                                                                                                                                                                                                                                                     120
                                                                                                        304
```

```
밁
                      S
                                                      밁
                                                                             S
                                                                                                              В
                                                                                                                                       Ś
                                                                                                                                                                     밁
                                                                                                                                                                                              S
                                                                                                                                                                                                                             Query Match
Best Local S
Matches 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    joint disease; pathologic angiogenesis; diagnosis; antiinf cardiant; gene therapy; secretory cell function regulator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF59093 standard;
                                                                                                                                                                                                                                                                                                                          The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MLP; MIA; melanoma inhibitory activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rat MLP nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF59093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibitor; ds.
                                                                                                                                                                                                                                                                                  Sequence 307 BP; 84 A; 56 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 9; Page 104; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                         Local Similarity
  187
                           181
                                                       127
                                                                                   121
                                                                                                               67
                                                                                                                                          61
                                                                                                                                                                                                                                                                                                               exemplification of the present invention.
                                                                                                                                                                        ~
                                                                                                                                  TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                          CATGGCATGITTATGGATAAACTTTCTTAAGAAGTTGTGTGGAGAGAGGAGGAGTGTGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nishi K,
                AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                              TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                     CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
  GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                       AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0gi K,
                                                                                                                                                                                                                                          98.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO:41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48
                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                     90 G; 77 T; 0 other;
                                                                                                                                                                                                                                            Score 281.6; DB 2
Pred. No. 6.7e-84;
                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancer; bone disease;
diagnosis; antiinflammatory;
function regulator; promoter;
                                                                                                                                                                                                                                                         DB 22;
                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Noguchi Y,
                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yoshimura K;
                                                                                                                                                                                                                                   1.
                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             joint
```

240

186

180

120 66

```
RESULT 7
AAF59092
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                    8
               Ş
                                            Ď,
                                                                                                                               Ş
                                                                                                                                                              밁
                                                                                                                                                                                      Š
                                                                      Š
                                                                                                                                                                                                                      Query Match
Best Local S
Matches 261
                                                                                                                                                                                                                                                                                                                        The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF59092;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59092 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rat MLP nucleotide sequence SEQ ID NO:40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                Sequence 261 BP; 72 A; 46 C; 75 G; 68 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             247
                  195
                                                                                                                                                                                                                        261;
                                                                                                       61
                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                             exemplification of the present invention.
                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTATACCAGGAGGGCCACCAAGGAGAT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGA-GGCCACCAACCAAGGAGAT 299
TGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTCCCCAGCAA
                                                                 GCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGC
                                                                                                       GGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGG
                                                                                                                              GCCAAGAGCACAGGAAGACTACAATGCCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGG
                                                                                                                                                               GGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCT
                                                                                                                                                                                     GGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 104; lllpp; Japanese.
                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ogi K,
                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                     79.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ohkubo S,
                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                       Score 261; DB 22;
Pred. No. 4.9e-77;
                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mogi S,
                                                                                                                                                                                                                                                        DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Noguchi Y,
                                                                                                                                                                                                                                                     Length 261;
                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yoshimura
                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              joint
                     254
                                                  180
                                                                             194
                                                                                                                                                                    6
                              S
                                                              맑
```

```
S
                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮹
Ś
                               밁
                                                                                            Query Match
Best Local Similarity
Matches 279; Conserv
                                                                                                                                                                                    The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases a well as pathologic angiogenesis. AAF59063 to AAF69132 to AAF69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF59079 standard; DNA; 330
                                                                                                                                                        Sequence 330 BP; 91 A; 60 C; 91 G; 88 T; 0 other;
                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 97; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human MLP nucleotide sequence SEQ ID NO:23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59079;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB; AAB69126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 CTTGGTTAGAGAGCAACGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
 61
                                                              _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTGGTTAGAGAGCAACGAGT 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTCCCCAGCAA 240
   TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                               CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                            салодсалоттталодаталастттсттсталдаласттототосладателодоготого
                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ogi K,
                                                                                                              84.8%;
                                                                                                              75.5%; Score 249; DB 22; 84.8%; Pred. No. 5.6e-73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mogi S,
                                                                                                                            DB 22;
                                                                                                                           Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yoshimura K;
                                                                                               0
                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                         joint
                                    60
```

121 121 13

AATGTCAAGAAAGGGCAGCAGCAGCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180

CCCCGGACTGTAGATTCATT

120

0

```
ARESULT 9
AAFSO ID
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
AAFSO XX
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
밁
                                                                         Ś
                                                                                                                                                                    Matches
                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF59065 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AABS9122 to AABS9132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WC200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF59065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JUN-1999;
                                                                                                                                                                                                                                                                                                                            Sequence 384 BP; 99 A; 70 C; 106 G; 109 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 91; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                          in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-159271/16.
                                                                                                                                                                        279;
55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĠĠĀĠĀĀTŤŢŢĠĠĠĊŢĠĠĊĀĠŢĠŢŢŦĀŢĠĠŢĠĀŢĠĊĊĀĠĠĀĊĠĀĠĀŤĠĠĠĀGŢĊĠŢĠĠŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB69123.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cccaccacaratraacriciiciaca 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nishi K, Ogi K,
                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleotide sequence
                                                   chreen tatte de concreta controca a caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caracter de caract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99JP-0186718
                                                                                                                                                                                                               75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    쁌
                                                                                                                                                                             0
                                                                                                                                                                                                                    Score 249; DB 2
Pred. No. 6e-73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO:4.
                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mogi S,
                                                                                                                                                                                                                                                           DB 22; Length 384;
                                                                                                                                                                                 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Noguchi Y,
                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yoshimura
                                                                                                                                                                                     0
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       χ,
                     114
                                                                                                   60
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease; respiratory disease; renal; gastrointestinal; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAS17583 standard; cDNA; 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA encoding novel secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-FEB-2002
The invention relates to an isolated novel secreted polypeptide (I) and polynucleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, neurological and psychiatric diseases, cardiovascular diseases, respiratory diseases,
                                                                                                               New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer
                                                                                                                                                                                            WPI; 2002-061975/08.
                                                                                                                                                                                                                                                                                              13-APR-2000; 2000US-196603P.
24-APR-2000; 2000US-199417P.
                                                                                                                                                                                                                                                                                                                                         11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                                                                                                                                                                                                                  WO200179454-A1.
                                                                                      Claim 2; Page 44; 92pp; English.
                                                                                                                                                                            P-PSDB; AAU09871.
                                                                                                                                                                                                                                                    (SMIK )
                                                                                                                                                                                                                       Agarwal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                         ۳J
                                                                                                                                                                                                                                                    SMITHKLINE BEECHAM CORP
SMITHKLINE BEECHAM PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCACCACGATATTGACTTCTTCTGCGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŢŔŢŢŢĊĊĊĊŔĠĠŔŔĊŢŢĠĠŢĊŔĄĠĠŔĄĊŔĠĠŢĠŢĠŢĠŢŔĊĊŔĠĠŔĄĠĊŢŔĊĊŔŔĠĠŔĄĠŢŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                          Murdoch PR,
                                                                                                                                                                                                                                                                                                               2000US-196603P
                                                                                                                                                                                                                                                                                                                                                                                                                               /product= "Human secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1..387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cocation/Qualifiers
                                                                                                                                                                                                                            Rizvi SK,
                                                                                                                                                                                                                            Smith
                                                                                                                                                                                                                             Xiang
                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               294
```

```
Drmanac RT;
         Mize NK,
          Boyle BJ,
            Ford JE,
             Arterburn MC,
             Tang YT,
```

BXBXBX

19-JUL-2002 ABL95740;

(first entry)

ABL95740 standard; cDNA; 521

401

300 312 240 252 180

372

Human angiogenesis related cDNA PRO9873 SEQ

ID NO:

```
888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        renal diseases, or gastrointestinal diseases. These may also be used to treat diseases, abnormalities and disorders caused by abnormal expression, production, function and/or metabolism of the genes, as expression methods for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polypucleotides may be used as diagnostic reagents, in chromosome localisation studies, and in tissue expression studies. The present sequence represents the coding sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 387 BP; 101 A; 70 C; 106 G; 110 T; 0 other;
                                                                                                                                                                                                                                                                                                      Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                      Human growth regulatory-like polypeptide clone 16372272.
                                                                                                                                                                                                                                                                                                                                                                                           02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                            AAH26341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH26341 standard; cDNA; 426 BP.
                                                                                                                                                                                                                      WO200155332-A2
                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                  25-JAN-2000;
02-MAY-2000;
                                                                                                                                                 25-JAN-2001; 2001WO-US02455.
                                                                                                                                                                                    02-AUG-2001.
                                                                  (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CATGGCATGITTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                татттсссскасскасттесттасаскаскасскастствесскасскасскасскас
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pateteaagaaageecaecaeatetatettattecaaecteetaacaeaaaateeaect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĠĠĄĠĄĂŦŦŦŦĠĠĠĊŦĠĠĊĀĠŦĠŦŦŦĂŦĠĠŦĠĀŦĠĠĊŔĞĠĄĊĠĂĠĀŦĠĠĠĄĠŦĊĠŦĠĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCACCACGGATATTGACTTCTTCTGCGA 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                  2000US-0491404.
2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 249; DB pred. No. 6e-730; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 24; Length 387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              294
```

```
밁
                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                               밁
                                                                                            Ś
                                                                                                                                                    밁
                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        regulatory-like polypeptide (GRLP, see ARB2671). The GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein growth factors, human melanoma derived growth regulatory protein growth factors, human melanoma derived growth regulatory protein growth factors acids similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid sensitive protein (CD-RAP, 44% identity and 64% retinoic acid-sensitive proteins. GRLP polypeptides and polynuclectides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and timmours including neurocorrodermal rimmours anch as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      flanking the inserts, sequencing techniques. This signature analysis, and Sanger sequencing techniques. This expressed sequence tag was used in the assembly of a full-length expressed sequence tag was used in the assembly of a full-length cDNA sequence (see AAH26343) encoding a novel human growth CDNA sequence (see AAH26343) encoding a novel human growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16372272, which was obtained from a human thymus cDNA library using standard PCR with primers specific for vector sequences flanking the inserts, sequencing by hybridisation sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    growth and tumours, including neuroectodermal tumours such as gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is that of Hyseq clone identification number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Page 114; 119pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 426 BP; 119 A; 73 C; 113 G; 120 T; 1 other;
                                                                                                    241
                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                            133
                                                                                                                                                                                                                                                                                                                                                                                                                                                              73 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 132
                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                   AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAĞCT
                                                                                                                                                                                                                                                                                                     AATGTCAAGAAAGGGCAGGAGCTGATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 192
                                                                                                                                                                                                                                                                                                                                                                                                               TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                    TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                    GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                      GGGGCATTCTGGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
CCAACCACGGATATTGACTTCTTCTGTGA 329
                                               TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 249; DB 22;
Pred. No. 6.3e-73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

```
18-SEP_2000; 2000US-0665350.

18-SEP_2000; 2000US-07922P.
24-OCT-2000; 2000US-0719238.
08-NOV-2000; 2000WO-US30952.
10-NOV-2000; 2000WO-US30953.
10-DEC_2000; 2000WO-US32678.
20-DEC_2000; 2000US-0747259.
20-DEC_2000; 2000US-0767609.
28-FEB-2001; 2001US-076666.
09-MAR-2001; 2001US-0796498.
28-FEB-2001; 2001US-086666.
09-MAR-2001; 2001US-0808689.
14-MAR-2001; 2001US-0808689.
14-MAR-2001; 2001US-0808689.
16-MAY-2001; 2001US-0864208.
10-MAY-2001; 2001US-0864208.
10-MAY-2001; 2001US-08664208.
25-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001US-0866034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; anglogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder; cardiant; cycostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-JUL-2000;
25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
28-JUL-2000;
02-AUG-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-AUG-2000;
24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200208284-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-SEP-2000;
                  Baker KP, Fe
Godowski PJ,
          Stephan JF,
                                                                                                                        (GERR/)
(GODD/)
(GODO/)
(GURN/)
(HILL/)
                                                                                                    (MARS/)
                                                                                                                                                                          (GERB/)
                                                                                                                                          GEKRII
GODDARD A.
                                                                                                                                                                                    BAKER K P.
FERRARA N.
                                                                                                               GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                          GENENTECH INC
                                                                                                                                                                GERRITSEN M E
                                                              WATANABE C K. WILLIAMS P M.
                                                                                 PAONI N F.
STEPHAN J F.
                                                      WOOD W I.
                                                                                                       PAN J.
            Ferrara N, Ger
PJ, Gurney AL,
F, Watanabe CK,
                                                                                                                                                                                                                                       2001US-0866034.
2001WO-US17092.
2001WO-US1709574.
2001WO-US17443.
2001WO-US17800.
2001WO-US19892.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001WO-US21735.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US20710.
2000US-222695P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-000000P.
2000US-0664610.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0643657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-230978P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000WO-US23328.
              Gerber H, Gerri
L, Hillan KJ, M
CK, Williams PM,
                 Gerritsen ME, Goddard A
KJ, Marsters SA, Pan J,
ms PM, Wood WI, Ye W;
                                      Goddard A;
```

```
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
RESULT 13
ABL88251
ID ABL88
XX
ABL88251
AC ABL88
XX
AC ABL88
XX
AC ABL88
XX
VI
AC Human
XX
Human
XX
VI
AC Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
KW Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, arthursology, trauma, cancer, age-related macular degeneration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atherosclerosis, hypertension, arterial restenosis, rheumatoid arthril angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumoul angiogenesis (such as breast carcinoma and liver carcinoma) and wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Fig 359; 567pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; ABB95602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            healing. The present sequence is a coding sequence of the invention.
                                                                                                                                                                                                        gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophlebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human PRO9873 cDNA sequence SEQ ID NO:359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABL88251 standard;
                                                                                                                                                                                                                                                                                                                              Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-171999/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chrecantatatratechecerciaectrocandadecreterechecheateateatete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                geograficioegraecaerofitaroegraecaecaecaegaigaeraaroegaaringioegr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGTCAAGAAAGGGCAGCAGAATCTATGTTTATTCCAAGCTGGTAACAGAAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTTAGAGAGGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĠĠŖĠŖŖŢŢŢŢĠĠĠĊŢĠĠĊŔĠŢĠŢŢŢŖĸŢĠĠŢĠŔŢĠĠĊĊŔĠĠŔĊĠŔĠŔŢĠĠŔĠŢĊĠŢĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cccaccacadararraacrrcrrcracaa 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                     chromosome mapping; gene mapping; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 249; DB 24;
Pred. No. 6.9e-73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       331
```

03-JAN-2002 WO200200690-A2

Tue

Dec

30

0

120 151

240 271 180

300 331

391

```
ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to CC ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, CC antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic CC activities, and can be used in gene therapy. The PRO polynucleotides, CC proteins, agonists and antagonists are useful for treating or diagnosing CC proteins, agonists and antagonists are useful for treating or diagnosing CC a cardiovascular, endothelial or angiogenic disorder in a mammal, CC e.g. cardiac hypertrophy, trauma, cancer, age-related macular CC degeneration, atherosclerosis, hypertension, arterial restenosis, rhumatoid arthritis, angina, myocardial infarctions, thrombophiebitis, CC promatoid arthritis, angina, myocardial infarctions, thrombophiebitis, CC carcinomal and wound healing. The PRO polynucleotides have applications CC in molecular biology, including use as hybridisation probes, and in CC chromosome and gene mapping. ABL88259 to ABL88267 represent primers and CC probes used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-SEP-2000; 24-OCT-2000; 28-NOV-2000; 208-NOV-2000; 210-DEC-2000; 20-DEC-2000; 220-DEC-2000; 220-DEC-2001; 226-FEB-2001; 226-FEB-2001; 209-MAR-2001; 214-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MAR-2001; 210-MA
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-AUG-2000;
07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-JUL-2000;
02-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker KP, Fe
Godowski PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 2; Fig 359; 565pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GETH ) GENENTECH INC
                                                                    Sequence 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-090516/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABB84996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-219556P.
2000US-220624P.
2000US-220664P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000WO-US30952.
2000WO-US30873.
2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US23522.
2000WO-US23328.
2000US-230978P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001US-0866028.

2001US-0866034.

2001WO-US17092.

2001US-0870574.

2001US-0817443.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001US-0828366.
2001US-0854208.
2001US-0854280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001US-0802706.
2001US-0808689.
2001US-0816744.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001US-0767609.
2001US-0796498.
2001WO-US06520.
2001WO-US06666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001WO-US19692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-242922P.
2000US-0709238.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0664610.
2000US-0665350.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0643657.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US34956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001WO-US17800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney AL,
                                                                           BP; 167
       75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CK,
                                                                         A; 86 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gerber H, Gerrit
L, Hillan KJ, Ma
CK, Williams PM,
         Score 249; DB 24;
Pred. No. 6.9e-73;
                                                                                131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gerritsen ME, Goduar
KJ, Marsters SA, Pan J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NF;
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
RESULT 14
ABK33571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                            25-JUL-2000;
25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                 Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation; tumour necrosis factor-alpha; gene; 85.
                                                                                                                                                                                                                                                                                                                                                                                                         ABK33571 standard; cDNA; 521 BP
                                                                                                                                                                                                                                                                                                                                                  cDNA encoding human PRO protein,
                                                                                                                                                                                                                                                                                                                                                                      08-MAY-2002
                                                     15-SEP-2000;
10-NOV-2000;
28-NOV-2000;
01-DEC-2000;
20-DEC-2000;
                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                           25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                              31-JAN-2002.
                                                                                                                                                                                                                                                               WO200208288-A2
                                                                                                                     26-JUL-2000;
28-JUL-2000;
                                                                                                                                                                                                        20-JUL-2000;
                                                                                                                                                                                                                            29-JUN-2001;
                                                                                                   23-AUG-2000;
24-AUG-2000;
                                                                                                                                        25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 AATGICAAGAAAGGGCAGCAGCATCTATTGTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ĠĠŖĠŖŔŦŦŦŦĠĠĠĊŦĠĠĊŔĠŦĠŦŦŦŔŦĠĠŦĠŔŦĠĠĊŔĠĠŔĊĠŔĠŔĊĠŔĠĠŔĠŦĊĠŦĠĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŢŖŢŢŢĊĊĊĊĀĠĠŖĀĊŢŢĠĠŢĊĀĀĠĠĀĀĊĀĠĊĠŢĠŢĠŢĀĊĊŔĠĠĀĀĠĊŢĄĊĊĀĀĠĠĀĀĠŦŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ТАТТТССССАGСААСТТGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cccaccacaararraacrrcrrcracaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                  2000US-220607P.
2000US-220624P.
2000US-220638P.
2000US-220664P.
                                             2000US-220893P.
2000WO-US23522.
2000WO-US23522.
2000WO-US23328.
2000US-000000P.
2000US-0308673.
2000US-25364878.
2000US-0747259.
2000US-0747259.
                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                          2000US-219556P
                                                                                                                                                                                                                             2001WO-US21066
                                                                                                                                                                                       2000US-220605P
                                                                                                                                                                                                 2000US-220585P
                   2001WO-US17092
                                                                                                                                             -220666P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                       Seq ID No 71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

(GETH)

GENENTECH

```
The invention relates to one hundred and twenty two nucleic acids concoding PRO polypeptides. The sequences of the 122 PRO polynucleotides encode human secreted proteins. The PRO nucleic acids, polypeptides, concode human secreted proteins. The PRO nucleic acids, polypeptides, concode human secreted proteins. The PRO nucleic acids, polypeptides. Concoder, colon cancer, breast tumour, prostate tumour, rectal tumour or cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or concoderation of, or gene expression, in pericyte cells, for the proliferation of, or gene expression, in pericyte cells, for the proliferation or differentiation of chondrocyte cells, for concoderation of the proliferation of normal human blood, stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal for stimulating the proliferation of normal human dermal for stimulating the proliferation of normal human dermal concoderations in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABK3356-ABK33657 represent human concoderation coding sequences of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Simi
Matches 279;
     SXSXSXSXS
SXSXSXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker KP, D
Grimaldi JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2; Figure 71; 359pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                             AAH98228 standard; cDNA;
Human; sheep; pig; cow; fruit fly; yeast; hamster;
                                                                          12-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-172001/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                    392
                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92
                                    EST-derived coding sequence SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                           GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                              ÄACGTTÄÄAAÄÄGGGCAGCÄGATCTATGTGTACTCAÄAGCTGGTAAAAGÄÄAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers
                                                                                                                                                                                                                                 cccaccacararraacricirciacaa
                                                                                                                                                                                                                                                                 ccaaccacggararrgacrrcrrcrgrga 329
                                                                                                                                                                                                                                                                                                    TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                      татттссссавсаясттветтавававскае вствета ссаввавесса сславваватт
                                                                                                                                                                                                                                                                                                                                                                           GGAGAATTTTGGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney
                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gerritsen ME, Goddard
Smith V, Stephan JF,
                                                                                                                                                   891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 249; DB 24; Length 521; Pred. No. 6.9e-73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski PJ;
            macaque; horse;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211
                                                                                                                                                                                                                                                                                                                                                                                       331
                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
```

S 밁

밁 S 맑

S 밁 Ś

Ş 밁

Search completed: December 30, Job time : 110.538 secs

2003, 02:14:35

```
Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tomato; monkey; dog; sea urchin; expressed sequence tag; EST; diagnostics; forensic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-JAN-2000; 2000US-0491404.
17-JUL-2000; 2000US-0617746.
03-AUG-2000; 2000US-0631451.
15-SEP-2000; 2000US-0663870.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention provides the protein and coding sequences of novel proteins from a variety of organisms, including human, dog, cat, horse, cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (ESTs) from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess today or nutritional purposes. The present sequence is a cDNA biodiversity and for nutritional purposes. The present sequence is a cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200154477-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 891 BP; 272 A; 146 C; 214 G; 259 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 236; 1275pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Isolated polypeptide for treatment of diseases, diagnostics, raising antibodies and research use -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match 75.5%;
Local Similarity 84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-476164/51.
                                                                                                                                                                                                                                                                                                                                      133
373
                                         301
                                                                                  313
                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                    73
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAM23569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drmanac RA,
                                                                                                                                                                                                                                                                                                                                                                         TATACCATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Liu C,
                                                                                                                                                                                                                                                                            AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                    ĊĀTĠĠĀĀŤĀŤTĀŤĠĠĀCCGTĊTĀGĊŤŤĊCĀĀĠĀĀĠCŤĊTĠŤĠĊĀĠĀŤĠĀTĠĀĠŤĠŤĠŤ
                                                                                                          TATTTCCCCAGCAACCTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                     gegecarrengeernegeagrerrangergaceaceageagargagareegaarrengegr 240
                                                                                                                                                                                                                                                  <u>AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT</u>
                                                                                                                                                                                                                                                                                                                                  TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 192
                         CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                             TATTTĊĊĊĊĀĠĢĀĀĊTTĠĠŤĊĀĀĢĠĀĀĊĀĢĊĠTĠŤĠŤĀĊĊĀĠĠĀĀĠĊTĀĊĊĀĀĠĠĀĀGTŤ
CCCACCACGATATTGACTTCTTCTGCGA 401
                                                                                                                                                                GCAGAÁTTTTTGGGCTGGCÁGTGTTTÁTGGTGÁTGGCCÁGGÁCGÁGÁTGGGÁGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001WO-US02687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhou P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 249; DB 22
pred. No. 8.8e-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Werhman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang
man T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Asundi V;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                   312
                                                                                                                                                                                                                                                                     252
```

0

```
CM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
                                                                                                                                                                                                                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62:
                                                                                                                                                                                                                                                                                                                                                                   NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December 30, 2003, 04:08:13 ; Search time 270.994 Seconds (without alignments) 4172.254 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2244575 seqs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Published_Applications_NA:*

1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                   Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                        Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               catggcatgtttatggataa.....atattgacttcttctgtgaa 330
  / cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq: *
/ cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq: *
/ cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq: *
/ cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq: *
/ cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq: *
/ cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq: *
                                                                                                                                                                                                                                                                                                                                                                       В
US-10-219-068-71

US-10-219-069-71

US-10-219-073-71

US-10-219-475-71

US-10-219-480-71

US-10-219-483-71

US-10-219-525-71

US-10-219-526-71

US-10-219-530-71
                                                                                                                                                                                                                                                                         US-10-216-038-1
US-10-216-163-71
US-10-218-765-71
                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                      US-10-219-066-71
US-10-219-067-71
                                                                                                                                                                                                                                                      US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                            Description
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
                                                                                                                                                                                                                                                                                Sequence 71, App. Sequence 71, App.
                                                                                                                                                                                                                                                                                                                             Sequence 1,
```

4 4 4 5	43	42	41	40	9	86		3 0	, ,	о (п .	٠ 4	w W	32	31	30	29	9 6) t	27	26	25	24	23	22	21	2	3 1	6	18	17	16	
249	249	249	249	249	249	249	1 2	2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	3 1	ا د د	249	249	249	249	249	647) t	249	249	249	249	249	249	249	249		3 1	249	249	249	249	
75.5	١U	េហ	· U	יטי	ıσ	ıυ	7 6	лι	,, ,	,,	יט	v.	v	•	٠			٠.	٠.	•											٠	
521	7 5		-	, ,	, ,	,	3 ;	2 1	2	2	2	21	2	-	-	: ;	3	ï	ï	ï	-	· j		• •		ا د	_	μ,	ч	٠,	-	•
15	ם ה	י ו	ין נ	ı u	1 1	i (7 1	5	5	5	15	15	15	Ų	ij	1	7	15	15	15	Ų	1 0	1 6	1	3 (ונ	Ľ	L)	L	1.5		
0-219-468	-10-218-956-7	70-216-216-7	10-00-011	10-22-21-7	-10-230-260-7	10-219-481-7	-10-219-479-7	-10-219-466-7	-10-219-464-7	-10-219-075-	-10-219-003-7	-10-230-434-7	-0.0-617-01-	101661	10 11 0 0 0	10-227-873-7	.10-218-849-	·10-216-159A·	10-230-414-/1	TO-817-01	101000000000000000000000000000000000000	-10-320-338-3	10-220-163-5	10-227-884-71	-10-221-082-3	-10-232-228-7	-10-230-437-7	-10-223-081-3	T - 100 - 120 - 12 - 12 - 12 - 12 - 12 -	700-617-	1000000	-10-219-531-7
equence 71,	enc	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence /1,	equence /+,	equence 71	emience 71. App	equence 71.	muence 71. App	equence 71,	equence 71, App	equence /1,	equence /1,	questoo /1/	mience 71	mience 71,	guence 71,	quence 71,	guence 71,	quence 359	quence 71,	iquence /i,	quenco 71	emience 359	quence 71,	equence 71.	equence 71,

ALIGNMENTS

RESULT 1 US-10-216-038-1

; GENERAL INFORMATION:

APPLICANT: Mize, Nancy K
APPLICANT: Boyle, Bryan J
APPLICANT: Ford, John E
APPLICANT: Arterburn, Matthew C

APPLICANT:

Tang, Y Tom Liu, Chenghua Sequence 1, Application US/10216038 Publication No. US20030124573A1

```
NAME/KEY: misc feature; LOCATION: (426)...(426) OTHER INFORMATION: n = A, US-10-216-038-1
                                                                                                                                                                                          SEQ ID NO 1
LENGTH: 426
Query Match 75.5%;
Best Local Similarity 84.8%;
Matches 279; Conservative
                                                                                                                                                                                                                           APPLICANT: Sjastad, Michael
TITLE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth
TITLE OF INVENTION: Methods and Polynucleotides
FILE REFERENCE: HYS-7CIP
CURRENT FILING DATE: 2002-08-08
PRIOR APPLICATION NUMBER: US/10/216,038
CURRENT FILING DATE: 2000-05-02
PRIOR FILING DATE: 2000-05-02
PRIOR FILING DATE: 2000-01-25
NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                          ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                      Song, Yong
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drmanac, Radoje T
                                                                                           'n
                                                                                           ç,
     0
                     Score 249; DB 15; Length 426; Pred. No. 2.8e-76;
       Mismatches
                                                                                              0
2
0
          Indels
            0
              Gaps
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3530PIC3
CURRENT APPLICATION NUMBER: US/10/216,163
CURRENT FILING DATE: 2002-08-09
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
                                                                                                                                             PRIOR PELLING ION UMBER: 60/064103
PRIOR PELLING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/07928
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 71, Appublication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                 SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                   Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                    PRIOR FILING DATE: 1998-03-27
TYPE: DNA
ORGANISM: Homo Sapien
                                       ENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATOGAATATTTATOGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACCATTTCTCTGGCAAGAGCACAGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGCATGTTTATGGATAAACTTTCTTATGAAGATTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAĞCT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ĠĠĀĠĀĀŤŤŦŦĠĠĠĊŤĠĠĊĀĠŦĠŤŤŦĀŦĠĠŤĊĀŦĠĢĊĊĀĠĠĀĊĠĀĠĀŤĠĠĠĀĠŦĊĠŦĠĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGCATTCTGGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGCAACTTGGTTAGAGAGCCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cccaccacaararraacricitciacca 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10216163
No. US20030149239A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney, Austin L. smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
```

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-218-765-71
; Sequence 71, Application US/10218765
; Publication No. US20030187201A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                 FILLE OF INVENTION TO THE PRICE REFERENCE: 2330PIC19

CURRENT APPLICATION NUMBER: US/10/218,765

CURRENT FILING DATE: 2002-08-12

PRIOR APPLICATION NUMBER: 10/119,480

PRIOR FILING DATE: 2002-04-09

PRIOR APPLICATION NUMBER: 60/069113

PRIOR FILING DATE: 1997-09-17

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR FILING DATE: 1997-10-17

PRIOR APPLICATION NUMBER: 60/063549

PRIOR FILING DATE: 1997-10-28

PRIOR APPLICATION NUMBER: 60/064103

PRIOR APPLICATION NUMBER: 60/064103

PRIOR APPLICATION NUMBER: 60/069973

PRIOR APPLICATION NUMBER: 60/069873

PRIOR APPLICATION NUMBER: 60/069873

PRIOR APPLICATION NUMBER: 60/069873

PRIOR FILING DATE: 1997-10-31

PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 279; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin APPLICANT: Desnoyers, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 ggggcATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212 AACGTTÄÄAAÄÄGGGCAGCAGATCTATGTGTÄCTCAAAGCTGGTAAAAGAÄATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 TATITCCCCAGCAACTTCGTTAGAGAGCGACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92 chredahrarrthredaccereracerrechadahaderererekahrdardaererere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĠĠĄĠĄĀŦŦŦŦĠĠĠĊŦĠĠĊĀĠŦĠŦŦŦĀŦĠĠŦĠĀŦĠĠĊĊĀĠĠĀĊĠĀĠĀŦĠĠĠĀĠŦĊĠŦĠĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ccaaccaccararreactrerrerea 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 249; DB 1
Pred. No. 3e-76;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  271
```

```
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                      PRIOR PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DR APPLICATION NUMBER: 60/086392
DR FILING DATE: 1998-05-22
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089532
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089538
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089905
DR FILING DATE: 1998-06-18
DR APPLICATION NUMBER: 60/089905
DR FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OR APPLICATION NUMBER: 60/096146
OR FILING DATE: 1998-08-11
OR APPLICATION NUMBER: 60/096791
OR FILING DATE: 1998-08-17
OR APPLICATION NUMBER: 60/097986
OR FILING DATE: 1998-08-26
OR FILING DATE: 1998-08-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DR FILING DATE: 1998-07-07
DR APPLICATION NUMBER: 60/095302
DR FILING DATE: 1998-08-04
DR FILING DATE: 1998-08-04
DR FILING DATE: 1998-08-04
DR APPLICATION NUMBER: 60/095916
DR FILING DATE: 1998-08-10
DR FILING DATE: 1998-08-10
DR FILING DATE: 1998-08-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/081955
FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/082804
FILING DATE: 1998-04-22
FILING DATE: 1998-04-22
                                                                                                                                                                                                                                             OR FILING DATE: 1998-09-10
OR APPLICATION NUMBER: 60/099816
OR APPLICATION NUMBER: 60/100038
OR APPLICATION NUMBER: 60/100038
OR FILING DATE: 1998-09-11
OR APPLICATION NUMBER: 60/100385
OR APPLICATION NUMBER: 60/100385
OR FILING DATE: 1998-09-15
OR FILING DATE: 1998-09-15
OR APPLICATION NUMBER: 60/100627
OR FILING DATE: 1998-09-16
OR APPLICATION NUMBER: 60/100627
OR APPLICATION NUMBER: 60/100648
OR APPLICATION NUMBER: 60/100848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/085323
FILING DATE: 1998-05-13
APPLICATION NUMBER: 60/085579
FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/084441
FILING DATE: 1998-05-06
DR FILING DATE: 1998-09-17
)R APPLICATION NUMBER: 60/101477
)R FILING DATE: 1998-09-23
)R APPLICATION NUMBER: 60/101738
)R APPLICATION NUMBER: 60/101741
)R APPLICATION NUMBER: 60/101741
)R FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090691
FILING DATE: 1998-06-25
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-09-10
APPLICATION NUMBER: 60/099811
FILING DATE: 1998-00-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-09-10
APPLICATION NUMBER: 60/099812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/099803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                               FILING DATE: 1998-09-18
APPLICATION NUMBER: 60/100919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-09-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-08-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-09-09
                                                                                                                                                                                                                                  1998-09-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/099596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/098544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/099598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR PRIOR PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                            OR FILING DATE: 1999-04-05
OR FILING DATE: 1999-04-05
OR FILING DATE: 1999-04-21
OR APPLICATION NUMBER: 60/131022
OR APPLICATION NUMBER: 60/131270
OR APPLICATION NUMBER: 60/131270
OR APPLICATION NUMBER: 60/131270
OR APPLICATION NUMBER: 60/131291
OR APPLICATION NUMBER: 60/131445
OR APPLICATION NUMBER: 60/131445
OR APPLICATION NUMBER: 60/131445
OR APPLICATION NUMBER: 60/131465
OR APPLICATION NUMBER: 60/140650
OR APPLICATION NUMBER: 60/140650
OR FILING DATE: 1999-06-22
OR APPLICATION NUMBER: 60/140723
OR APPLICATION NUMBER: 60/140650
OR APPLICATION NUMBER: 60/140650
OR APPLICATION NUMBER: 60/140650
OR APPLICATION NUMBER: 60/140650
OR APPLICATION NUMBER: 60/140650
                       DR FILING DATE: 1999-07-20
DR APPLICATION NUMBER: 60/145698
DR FILING DATE: 1999-07-26
DR FILING DATE: 1999-07-28
DR FILING DATE: 1999-07-28
DR APPLICATION NUMBER: 60/146963
DR APPLICATION NUMBER: 60/149320
DR APPLICATION NUMBER: 60/149320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1999-03-10
APPLICATION NUMBER: 60/125259
FILING DATE: 1999-03-19
APPLICATION NUMBER: 60/125775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1999-0: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/113621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/127887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1999-03-29
                                                                                                                                                                                                                                                   FILING DATE: 1999-06-22
APPLICATION NUMBER: 60/141037
FILING DATE: 1999-06-23
APPLICATION NUMBER: 60/144758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-12-23
```

APPLICATION NUMBER: 60/101786
FILING DATE: 1998-09-25
APPLICATION NUMBER: 60/101916
FILING DATE: 1998-09-24
APPLICATION NUMBER: 60/101922 APPLICATION NUMBER: 60/106178 APPLICATION NUMBER: 60/106248 FILING DATE: 1998-09-24 1998-10-29 1998-10-28

APPLICATION NUMBER: 60/108787 APPLICATION NUMBER: 60/106905 APPLICATION NUMBER: 60/106464 FILING DATE: 1998-11-03 1998-10-30 1998-11-17

APPLICATION NUMBER: 60/108801 FILING DATE: 1998-11-17 APPLICATION NUMBER: 60/108849 APPLICATION NUMBER: 60/113605 APPLICATION NUMBER: 60/113296 FILING DATE: 1998-12: APPLICATION NUMBER: 60/112422 1998-11-3 1998-12-22

APPLICATION NUMBER: 60/115565 APPLICATION NUMBER: 60/115558 1999-01-1 1998-12-23 1999-01-12

APPLICATION NUMBER: 60/123618 APPLICATION NUMBER: 60/ FILING DATE: 1999-02-10 FILING DATE: 1999-01-12 60/119549 60/115733

FILING DATE: 1999-03-23 APPLICATION NUMBER: 60/126773

1999-07-20

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
APPLICANT: SULLI, YLCULIA

APPLICANT: Stephan, Jean-Philippe F.

APPLICANT: Watanabe, Colin L.

APPLICANT: Watanabe, Colin L.

APPLICANT: Wood, William I.

APPLICANT: Wood, William I.

TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND TITLE OF INVENTION: ACIDS ENCODING THE SAME FILLE REFERENCE: P3530PLC24
CURRENT APPLICATION NUMBER: US/10/219,063
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Baker, I APPLICANT: Gesnoy APPLICANT: Goddar APPLICANT: Godows APPLICANT: Godows APPLICANT: Grimal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 71, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/149638
OR FILING DATE: 1999-08-17
OR APPLICATION NUMBER: 60/151733
OR PILING DATE: 1999-08-31
OR APPLICATION NUMBER: 60/164418
OR APPLICATION NUMBER: 60/164418
OR APPLICATION NUMBER: 60/16361
OR APPLICATION NUMBER: 60/169445
OR APPLICATION NUMBER: 60/169445
OR FILING DATE: 1999-11-07
OR FILING DATE: 1999-12-07
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
OR APPLICATION NUMBER: 60/169495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 AATGTCAAGAAAGGGCAGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTIGTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aacgitaaaaaaagecaecaecaertetatetetacteaaaectegitaaaageaaaategaect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATACCATTTCTCGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĠĠŖĠŖĂŦŦŦŦĠĠĠĊŦĠĠĊŔĠŦĠŦŦŦŔŦĠĠŦĠŔŦĠĠĊĸĠĠŔĊĠŔĠŔŦĠĠĠŔĠŦĊĠŦĠĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cccáccácdararidacricticideda 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ccaaccaceararreactretterea 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TÄTTTCCCCAGGÄÄCTTGGTCAAGGÄACÄGCGTGTGTÄCCÄGGÄAGCTÄCCÄÄGGÄAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              татттесесья селесттвеття вывесельствет посторование поставления поставляющих поставления поставляющих поставления поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставляющих поставля
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gegecatīcīgegerigecagretītaregreaceaceageagareagaregeaartigieger 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/10219063
vo. US20030187202A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 249;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13; Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391
```

```
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR PRIOR PRIOR DATE: 1997-12-17
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR PILING DATE: 1998-03-25
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR PILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo Sapien US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                   Ś
                                                                                                                                                                                                                            B
                                                                                                         Ś
                                                                                                                                                    8
                                 S
                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                          152
                                                                                                                                                                                                                                                                     121
                                                                        332 TATTTCCCCAAGGAACTTGGTCAAGGAACAGCGTGTGTACCAAGGAAGCTACCAAGGAAGTT
                                                                                               241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGGGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                           181
                         301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                     61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                  92
                                                                                                                                                                                                                                                                                                                                                                                                               1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                              pacettaaaaaaeeecaecaectatetatetateteaaaectegitaaaaeaaaategaect
                                                                                                                                                                                                                                                                                                                                                                                chregantattihidehecestétagétitéchaghagetetétigehekiténtéhetététét 151
                                                                                                                                                                                         ggagcarrcragacragacagarrraaragargaccaccagaagargagarragagaarraragar 240
                                                                                                                                                                                                                                                                 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                      ŢĀŢĀĊŢĀŢŢĊŢĊŢĠĠĊŢĀĠŢĠĊŢĊĀĀĠĀĀĠĀŢŢĀŢĀĀŢĠĊĊĊĊĠĠĀĊŢĠŢĀĠĀŢŢĊĀŢŢ
                                                                                                                                                    ĠĠŖĠŖŖŦŦŦŦĠĠĠĊŦĠĠĊŖĠŦĠŦŦŦŖŦĠĠŦĠŖŦŒĠĊŖĠĠŖĊĠŔĠŔŦĠĠĠŔĠŦĊĠŦĠĠĠŦ
CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 249; DB 1
Pred. No. 3e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13; Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                           211
                                                                                                                                                                                                                                                     271
                                                                                                                                                                           331
```

```
RESULT 5
US-10-219-066-71
US-10-219-066-71
Sequence 71, Application US/10219066
Sequence 71, Application US/2030187203A1
Publication No. US20030187203A1
Sequence 71, Application No. US20030187203A1
Sepuration No. US20030187203A1
Sepuration No. US20030187203A1
Sepuration Description No. User No. Sepuration No. Colin L. Applicant: Garimald., J. Christopher Applicant: Wood, William I. Applicant: Wood, William I. Applicant: Wood, William I. Applicant: Wood, William I. Applicant: Wood, William I. Applicant: Wood, William I. Applicant: Wood, William I. Applicant: Wood, William I. Applicant No. Secrepte AND TRANSMEMBRANE POLYPEPTIDES AND TITLE OF INVENTION: SECREPTED AND TRANSMEMBRANE POLYPEPTIDES AND CURRENT APPLICATION NUMBER: US/10/219,066
CURRENT APPLICATION NUMBER: US/10/219,066
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
```

Tue

Dec

```
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-066-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                        RESULT 6
US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                    Sequence 71, Application US/10219067 Publication No. US20030187204A1
                                                                                                                                                                                                                                           GENERAL INFORMATION
                                                                                                                                                                      APPLICANT: Baker, K
APPLICANT: Desnoye
APPLICANT: Gerrits
APPLICANT: Goddard
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TIPLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C51
                                                                                                       APPLICANT:
                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079294
OR FILING DATE: 1998-03-25
OR APPLICATION NUMBER: 60/079656
OR FILING DATE: 1998-03-26
OR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/062287
FILING DATE: 1997-10-17
APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/069873
FILING DATE: 1997-12-17
APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92 CATOGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TATACCATTTCTCTGGCAAGAGCACAGGAAGATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               raractarriciciosecraerecreaagaagarraraarececesegaereagricarr 211
                                                                                                                                                                                                                                                                                                                                                           CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTICCCCAGCAACITGGITAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGAIT 300
                                                                                                                                                                                                                                                                                                                                                                                                                            ŢŖŢŢŢĊĊĊĊŔĠĠŔŖĊŢŢĠĠŢĊŔĄĠĠŖŖĊŔĠĠŢĠŢĠŢĠŢĸĊĊŔĠĠŖŖĠĊŢŔĊĊŔŔĠĠŔŖĠŢŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĠĠŖĠŖŖŢŦŦŎĠĠĊŶĠĠĊŔĠŶĠŦŦŦŔŦĠĠŶĠŔŦĠĠŦĠĠĠĠĠĠĠŔĠŔŶĠĠŔĠŶĠŶĠŶŶ
                                                                                                                                         Goddard, Audrey
Godowski, Paul J
Grimaldi, J. Christopher
                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                        Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                            Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 249; DB 13; Length 521; pred. No. 3e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
```

US-10-219-068-71

Sequence 71, Application US/10219068 Publication No. US20030187205A1 GENERAL INFORMATION:

APPLICANT:

Desnoyers, Luc Gerritsen, Mary Goddard, Audrey Godowski, Paul J. Grimaldi, J. Christopher Gurney, Austin L. Smith, Victoria

APPLICANT:

APPLICANT: Baker,

Kevin P.

APPLICANT: APPLICANT:

Stephan, Jean-Philippe

```
US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                    S
                                                                        밁
                                                                                                           S
                                                                                                                                                     밁
                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                     ઇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                         121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                               152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                             241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                              181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
  392
                      301 CCAACCACGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                  61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                               92 caregaararritaregaceereragerrecaagaagererererekagareagreagerer
                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                                                                                  AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                       GGAGAATŤTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                          TÄTTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 249; DB 13; Length 521; Pred. No. 3e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                        211
                                                                                                                                                                                                                                                                                                                                                                                                                     151
                                                                                                                                                                            331
                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                         271
                                                                                               391
```

```
CURRENT APPLICATION NUMBER: US/10/219,068
CURRENT FILING DATE: 2002-08-13
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/19,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
; Sequence 71. Application US/10219069; Publication No. US20030187206A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                  RESULT 8
US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  152 TÁTACTÁTTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTÁGATTCATT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                        301 CCAACCACGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                          241 TATTTCCCCAGCAACTTGGTTAGAGAGCGAGCGAGGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                        TÁTTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĠĠŖĠŖŔŦŦŦŦĠĠĠĊŦĠĠĊŔĠŦĠŦŦŦŔŦĠĠŦĠŔŦĠŖĊĊŔĠĠŔĊĠŔĠŔŦĠĠĠŔĠŦĊĠŦĠĠĠŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 249; DB 1:
Pred. No. 3e-76;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 13; Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
```

```
CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT EILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR PILING DATE: 1997-09-17
PRIOR PILING DATE: 1997-10-17
PRIOR PILING DATE: 1997-10-17
PRIOR PILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/06873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                  Ś
                                                                                   밁
                                                                                                                          Ś
                                                                                                                                                                          밁
                                                                                                                                                                                                               र्
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Watanabe, Colin L. APPLICANT: Wood, William I. APPLICANT: Wood, William I. TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                      181 GGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                     121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                       152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                       332
392
                    301 CCAACCACGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                             92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                 61 TATACCATTICTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 75.5%;
Similarity 84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimaldi, J. Christopher
                                                                                                                     TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAACGAGGAGTT
                                                                                                                                                                          GĠAGAĀTTTTĠGGĊTGGĊĀGŤGŤTTĀTGĠŤĠATGGČĊĀĠĠĀCGĀĠĀTĠGGAGTCGTGGGT
                                                                                                                                                                                                                                                                  AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                   TÁTTTCCCCÁGGÁACTTGGTCAAGGÁACÁGCGTGTGTÁCCAGGÁAGCTACCAAGGAAGTT
  CCCACCACGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 249; DB 1
Pred. No. 3e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                          391
                                                                                                                                                                                               331
                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                       271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.
```

US-10-219-073-71

Sequence 71, Application US/10219073 Publication No. US20030187207A1

```
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILLING DATE: 2002-04-09
PRIOR FILLING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/06349
PRIOR FILLING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILLING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILLING DATE: 1997-10-2-17
PRIOR APPLICATION NUMBER: 60/079910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P
APPLICANT: Desnoyers, Lu
APPLICANT: Gerritsen, Ma
APPLICANT: Goddard, Audr
APPLICANT: Godowski, Pau
APPLICANT: Grimaldi, J.
                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-073-71
                                                                                                                                                                         밁
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                    á
                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C52 CURRENT APPLICATION NUMBER: US/10/219,073 CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                         272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                        121 АЛГСТСААСАЛАССССАССАСАСТАТСТТАТТССААССТССТААСАСАЛАЛАГССАССТ 180
                                                                                                                                                                                                                                                                                                                                                   152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                        301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                241
                                                                                                                                                                                                                  181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
392
                                                                                                                                                                                                                                                                                                                                                                              61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
Godowski, Paul J
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                         CÁTGGAÁTATTTÁTGGÁCCGTCTAGCTTCCAÁGAÁGCTCTGTGCÁGÁTGÁTGÁGTGTGTC 151
                                                                                     TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                <u>ĀĀCGTTĀĀŖĀĀĀGGGĊAGCĀGATCTĀTGTGTĀCTCĀĀĀGCTGGTĀĀRĀGĀĀĀĀTGGĀĞCT</u>
CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 249; DB 13; Length 521; Pred. No. 3e-76; O; Mismatches 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                 271
                                                                                                        391
                                                                                                                                                                                                                                      240
```

```
RESULT 10
US-10-219-475-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/219,475
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 12002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo Sapien
US-10-219-475-71
                                                                                                                                                                          밁
                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 71, Application US/10219475 Publication No. US20030187208A1
                                                                                                                          S
                                      ঠ
                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: P3530P1C49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                        ttch 75.5%; Score 249; DB 1 al Similarity 84.8%; Pred. No. 3e-76; 279; Conservative 0; Mismatches
                                                                                                                                                                        212 AACGITAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTÁÁAAÁGAAAATGGAGCT 271
                                                                                                                                                                                                                     121 алтетсаледлалендерене темпеттаттесалестестваследалалетеслест 180
                                                                                                                                                                                                                                                                152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
    332
                                                                                                                                   181
                                                                                                                                                                                                                                                                                                  61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                    92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                  1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGGAGTGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski, Paul J.
Grimaldi, J. Christopher
                                        TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                      ĠĠĄĠĄĂŦŤŦŦĠĠĠĊŦĠĠĊĄĠŦĠŦŦŦŔŦĠĠŦĠĄŦĠĠĊĊĄĠĠĄĊĠĄĠĀŦĠĠĠĄĠŦĊĠŦĠĠĠĨ
ŦĀŦŦŦĊĊĊĊĀĠĠĀĀĊŦŦĠĠŦĊĀĀĠĠĀĀĊĀĠĊĠŦĠŦĠŦĀĊĊĀĠĠĀĀĠĊŦĀĊĊĀĀĠĠĀĀĠŦŦ
                                                                                                                 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 13; Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                           151
                                                                                                        331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

밁

```
SXCCCCCCCCCXXXPFFFXXX
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Simi
Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. DAR59083 to ARF59099 and ARB69122 to ARB69132 represent sequences used the contraction of the contraction of the contraction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 8; Page 97; 111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; AAB69126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 330 BP; 91 A; 60 C; 91 G; 88 T; 0 other;
                                                                                                                                                                                                                                                                                                              AAF59065 standard; DNA;
                                                                                                                                                           cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                           MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                        Human MLP nucleotide sequence SEQ ID NO: 4.
                                                                                                                                                                                                                                                     23-APR-2001
   30-JUN-1999;
                                                             11-JAN-2001.
                                                                                                                    Homo sapiens
                                29-JUN-2000;
                                                                                                                                               inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                        CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           татттссссандскатстветсанденнасноствтетнесноенностнескандент
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGÁGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGÁGÁTGGGÁGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ÄÄCGTTAAÄAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            raractartrectedectaerecteaagaagatraraateceeegaetgragarteatr
                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                       CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                         (first entry)
                                 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                    384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                    ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 330; DB 22;
Pred. No. 3.4e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                            330
                                                                                                                                                                                                                                                                                                                                                                                                                         330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
밁
                                                                                                                                                                  맑
                                                                                                                                                                                             Ś
                                                                                                    뭉
                                                                                                                                 Ś
      S
                                     밁
                                                             S
                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 330
                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB59122 to AAB69132 represent sequences used the contraction of the contraction of the contraction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 91; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                       Sequence 384 BP; 99 A; 70 C; 106 G; 109 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                      in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-159271/16.
                                                                                                       175
                                                                                                                                                                     115
                                                                        181
                                                                                                                                      121
                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
         241
                                                                                                                                                                                                                                                                                             330;
                                                                                                                                                                                                    61
                                                                                                                                                                                                                                 $5
                                                                                                                                                                                                                                                    1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nishi K,
                                                                                                                                                                   TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                               TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                               cárddaártártrárdbaccdroradcrirocaadaadcricrerecadaíteadareacterec
                                                                                                      <u>AÁCGTTAÁÁÁÁÁÁGGGCAGCAGATCTÁTGTGTACTCAAAGCTGGTÁAAAGAAAATGGAGCT</u>
                                                                                                                                 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAAATGGAGCT
                                        GGÁGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
TATTTCCCCAGGAACTTCGTCAACGAACACCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ogi.
K,
                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ohkubo
                                                                                                                                                                                                                                                                                                <u>.</u>.
                                                                                                                                                                                                                                                                                                          Score 330; DB ___.
No. 3.6e-97;
                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mogi S,
                                                                                                                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Noguchi Y,
                                                                                                                                                                                                                                                                                                                                  Length 384;
                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yoshimura K;
                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            joint
                                                                                                                                                                                                                                            114
                                                                                 240
                                                                                                                 234
                                                                                                                                                180
                                                                                                                                                                               174
                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                           60
                     300
                                                   294
```

0

```
RESULT 3
AAS17583
Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease;
            respiratory disease; renal; gastrointestinal; ss
                                                                                                                              DNA encoding novel secreted protein #12.
                                                                                                                                                                    26-FEB-2002
                                                                                                                                                                                                                                      AAS17583
                                                                                                                                                                                                                                      standard;
                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                          CDNA;
```

밁

355 301 295

cccaccacararraacricricracaa 384

CCCACCACGATATTGACTTCTTCTGCGAG 330

밁

TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT

```
Ş
                                                                                                                      밁
                                                                                                                                                                         Ş
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, or gastrointestinal diseases. These may also be used to treat diseases, abnormalities and disorders caused by abnormal expression, production, function and/or metabolism of the genes, as vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polypuctides may be used as diagnostic reagents, in chromosome localisation studies, and in tissue expression studies. The present sequence represents the coding sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to an isolated novel secreted polypeptide (I) and polynucleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, infilammatory disorders, infertility, neurological and disorders, infertility, neurological and disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-APR-2000; 2000US-196603P.
24-APR-2000; 2000US-199417P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2; Page 44; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-061975/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200179454-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 387 BP; 101 A; 70 C; 106 G; 110 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SMIK ) SMITHKLINE BEECHAM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      / Match
Local Similarity 100.0%; Pred. No. 3.0
                                                                                                                                                                                   181
                                                                                                                                                                                                                                               175
295
                                                                                                                                                                                                                                                                                                         121 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                               AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murdoch PR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product= "Human secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rizvi SK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 330; Ub ...
No. 3.6e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith RF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 24; Length 387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                            300
35
54
                                                                                                                                                                                      240
                                                                                                                                                                                                                                                   234
```

```
몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                        CC expressed sequence tag was used in the assembly of a full-length CC expressed sequence (see AAP2643) encoding a novel human growth CC cDNA sequence (see AAP2643) encoding a novel human growth CC cDNA sequence (see AAP2643) encoding a novel human growth CC regulatory-like polypeptide (GRLP, see AAB82671). The GRLP CC growth factors, human melanoma derived growth regulatory proteins, CC growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids) CC retinoic acid sensitive protein (CD-RAP, 44% identity and 64% cretinoic acid sensitive protein (CD-RAP, 44% identity and 64% cretinoic acid sensitive proteins. GRLP polypeptides and polymucleotides of the invention CC can be used in the prophylaxis, treatment (including gene therapy) CC and diagnosis of disorders and diseases caused by, or involving, CC cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as CC gllomas. The polymucleotides can also be used to design probes CC and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and CC peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human growth regulatory-like polypeptide clone 16372272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAH26341 standard; cDNA; 426 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Page 114; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JAN-2000; 2000US-0491404.
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence is that of Hyseq clone identification number 16372272, which was obtained from a human thymus cDNA library using standard PCR with primers specific for vector sequences flanking the inserts, sequencing by hybridisation sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCACCACGGATATTGACTTCTTCTGCGAG 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang YT,
```

Query Match 100.0%; Score 330; DB 22; Best Local Similarity 100.0%; Pred. No. 3.8e-97; Matches 330; Conservative 0; Mismatches 0;

Length 426; Indels

0

Gaps

Sequence 426 BP; 119 A; 73 C; 113 G; 120 T; 1 other;

Tue

```
RESULT 5
ABL95740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
 10-NOV-2000;
01-DEC-2000;
20-DEC-2000;
20-DEC-2000;
20-DEC-2000;
22-JAN-2001;
28-FEB-2001;
01-MAR-2001;
09-MAR-2001;
                                                                      18-SEP-2000;
18-SEP-2000;
24-OCT-2000;
08-NOV-2000;
08-NOV-2000;
                                                                                                                      23-AUG-2000;
24-AUG-2000;
07-SEP-2000;
                                                                                                                                            28-JUL-2000;
02-AUG-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                                        Human; angiogenesis; pRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
                                                                                                                                                                                                                                                                                                        Human angiogenesis related cDNA PRO9873 SEQ ID NO:
                                                                                                                                                                                                                                                                                                                           19-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                          ABL95740 standard; cDNA; 521
                                                                                                                                                                    25-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                    20-JUL-2000;
                                                                                                                                                                                                   09-JUL-2001; 2001WO-US21735
                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                    antiarteriosclerotic; gene; ss.
                                                                                                              15-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                  373
                                                                                                                                                                                                                                                                                                                                                                                                                                                               253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133
                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĠĠĀĠĀĀŢŢŢŢĠĠĠĊŢĠĠĊĀĠŢĠŢŢŢĀŢĠĠŢĠĀŢĠĠĊĊĀĠĠĀĊĠĀĠĀŢĠĠĠĀĠŢĊĠŢĠĠĠŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT</u>
                                                                                                                                                                                                                                                                                                                                                                                                 CCCACCACGGATATTGACTTCTTCTGCGAG 402
                               2000WO-US30873.
2000WO-US32678.
2000US-0747259.
2000WO-US34956.
2001US-0767609.
                                                                               2000US-0665350.
2000US-242922P.
2000US-0709238.
                                                                                                                      2000US-0643657.
2000WO-US23522.
2000WO-US23328.
2000US-230978P.
         2001US-0796498.
2001WO-US06520.
2001WO-US06666.
                                                                                                      2000US-000000P.
2000US-0664610.
                                                                       2000WO-US30952.
                                                                                                                                                      2000US-222695P
                                                                                                                                                             2000WO-US20710
                                                                                                                                                                     2000US-220664P.
                                                                                                                                                                             2000US-220624P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  252
                                                                                                                                                         밁
                                          Ś
                                                           밁
                                                                          á
                                                                                          밁
                                                                                                         Ś
                                                                                                                                 Query Match
Best Local S
                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2001;
20-JUN-2001;
28-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                            (GODO/)
(GURN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                   (GETH )
(BAKE/)
(FERR/)
(GERB/)
(GERR/)
(GODD/)
                                                                                                                                                                                                                                                                                                                                                                     (PAON/)
(STEP/)
(WATA/)
                                                                                                                                                                                                                                                                                                                                                                                                     (MARS/)
                                                                                                                                                                                                                                                                                                                                                                                             PANJ/)
            181
                             212
                                                            152
                                                                                                                           330;
                                                                           61
                                                                                           92
                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                             PAN J.
                                                                                                                           Conservative
```

```
14-MAR-2001; 2001US-0806689.
22-MAR-2001; 2001US-0816744.
05-APR-2001; 2001US-0828366.
10-MAY-2001; 2001US-0854208.
10-MAY-2001; 2001US-0854280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAY-2001; 2001US-0866028.
25-MAY-2001; 2001US-0866034.
25-MAY-2001; 2001WO-US17092.
30-MAY-2001; 2001US-0870574.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-2001; 2001WO-US17443
                                                Baker KP, Ferrara N, Gerber H, Gerritsen ME, Goddard A;
Godowski PJ, Gurney AL, Hillan KJ, Marsters SA, Pan J,
Stephan JF, Watanabe CK, Williams PM, Wood WI, Ye W;
P-PSDB; ABB95602.
                  WPI; 2002-171999/22.
                                                                                                                                                                                                                                                                                                            GERRITSEN M E.
GODDARD A.
GODOWSKI P J.
                                                                                                                                                   PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
                                                                                                                                                                                                                                                   GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                                                                                                                                                                                    GERBER H
                                                                                                                                                                                                                                                                                                                                                                                                                                  GENENTECH INC
                                                                                                                                    WOOD W
                                                                                                                                                                                                                                                                                                                                                                                                            BAKER K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US17800.
2001WO-US19692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001WO-US00000
                                                                                                                                                                                                                                                                                                                                                                                            z
                                                                                                    Goddard A;
                                                                                    Paoni NF
```

One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal

Claim 1; Fig 359; 567pp; English.

atherosclerosis, hypertension, arterial restenosis, rheumatoid arthrit angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumous angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a coding sequence of the invention. The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other; 100.0%; Score 330; DB 24; Pred. No. 4.2e-97; DB 24; Length 521; rheumatoid arthritis,

Mismatches

Indels

0

Gaps

1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTG TATACTATTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT GSAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGGAGTCGTGGGT AACGTTAAAAAAGGGCAGCÁGATCTATGTGTACTCÁAAGCTGGTAAAAGAAAATGGAGCT TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 0 151 271

밁 Ś 밁 S 밁

```
ABL88251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                              28-FEB-2001;
01-MAR-2001;
09-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertension; activity, atherosclerosis; hypertension; age-related macular degeneration; arterial restensis; angina; rheumatoid arthritts; myocardial infarction; thrombophlebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
                                                                                                                                  14-MAR-2001;
22-MAR-2001;
05-APR-2001;
10-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human PRO9873 cDNA sequence SEQ ID NO:359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL88251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABL88251 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                              08-NOV-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-JUN-2001; 2001WO-US19692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                     18-SEP-2000;
24-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                wound healing; chromosome mapping; gene mapping; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGATATTGACTTCTTCTGCGAG
                                                   2001US-0802706.

2001US-0808689.

2001US-0816744.

2001US-0828366.

2001US-0854208.

2001US-086428.

2001US-0866028.

2001US-0866034.

2001US-0866034.
                                                                                                                                                                                                                                     2001WS-0796498.
2001WO-US06520.
2001WO-US06666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0664610.
2000US-0665350.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-220664P.
2000WO-US20710.
                  2001US-0870574.
2001WO-US17443.
                                                                                                                                                                                                                                                                                                   2001US-0767609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-230978P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000WO-US23328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-222695P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-219556P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                     2000WO-US34956.
                                                                                                                                                                                                                                                                                                                                                             2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                             2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
  XXXXXXXX
                                                                                                                                                                               ABK33571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antianglogenic, hypotensive, vulnerary and antiarteriosclerotic antianglogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polynucleotides, proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal, e.g. cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertrension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABL88259 to ABL88267 represent primers and probes used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baker KP, Ferrara N,
Godowski PJ, Gurney I
Stephan JF, Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 2; Fig 359; 565pp; English.
Human; secreted protein; PRO; tumour; lung cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to ABB85003. The PRO proteins and polynuclectides have cardiant, cyt
                                   cDNA encoding human PRO protein, Seq ID No 71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GETH ) GENENTECH INC
                                                                                                                                                          ABK33571 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002-090516/12.
                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ferrara N, Gerander, H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGAGAGGAGTGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATTGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                      CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                            TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ilarity 100.0%;
Conservative
                                                                              (first entry)
                                                                                                                                                          cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerber H, Gerritsen ME, Goddard
L, Hillan KJ, Marsters SA, Pan o
CK, Williams PM, Wood WI, Ye W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 330; DB 24; Length Pred. No. 4.2e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
  colon cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Paoni NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cytostatic
```

Gaps

151

300

331 240 271

391

180

211

```
The invention relates to one hundred and twenty two nucleic acids commoding PRO polypeptides. The sequences of the 122 PRO polypucleotides commode human secreted proteins. The PRO nucleic acids, polypeptides, agonists and antagonists are useful for treating a PRO related disorder. CC cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or cliver tumour. The PRO polypeptides are useful for simulating the coliferation of, or gene expression, in pericyte calls, for stimulating the proliferation or differentiation of chondrocyte cells, for stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal fibroblast cells. The PRO polypeptide may also be used as molecular bloody, including use as hybridisation probes, and in chromosome and gene mapping. ABK33536-ABX33657 represent human cry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-UUL-2000; 2000WO-US20710
23-AUG-2000; 2000WO-US23522.
24-AUG-2000; 2000WO-US23328.
15-SEP-2000; 2000US-000000P.
10-NOV-2000; 2000US-053646P.
01-DEC-2000; 2000US-0747259.
20-DEC-2000; 2000US-0747259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pericyte cell proliferation; chondrocyte cell proliferation; tumour necrosis factor-alpha; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                breast cancer; prostate tumour; rectal tumour; liver tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                    One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-JUL-2000;
26-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Grimaldi JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JUL-2000;
Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                         Claim 2; Figure 71; 359pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                 AAU83627.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000WO-US34956.
2001WO-US06520.
2001US-0854280.
2001WO-US17092.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-220624P.
2000US-220638P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-220605P.
2000US-220607P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-219556P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000WS-220893P.
2000WO-US20710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-220666P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US21066.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-220585P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                               ΑĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen ME, Goddard Smith V, Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard A, Godowsai ..,
whan JF, Watanabe CK, Wood WI;
```

S

1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 60

Query Match Best Local Matches

Local

Similarity

100.0%;

Score 330; DB 24; Pred. No. 4.2e-97; Mismatches

Length 521; Indels

330;

Conservative

0,

0

0

0

The present invention provides the protein and coding sequences of novel proteins from a variety of organisms, including human, dog, cat, horse, cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (ESTs) from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess biodiversity and for nutritional purposes. The present sequence is a cDNA biodiversity and for nutritional purposes.

```
RESULT 8
AAH98228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                        Human; sheep; pig; cow; fruit fly; yeast; hamster; macaque; tomato; monkey; dog; sea urchin; expressed sequence tag; ES7 diagnostics; forensic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition; ss.
                                                                                                                                                                                                                                 25-JAN-2000; 2000US-0491404.
17-JUL-2000; 2000US-0617746.
03-AUG-2000; 2000US-0631451.
15-SEP-2000; 2000US-0663870.
                                                                                                                                                                                                                                                                                                                                                                                                                               Human EST-derived coding sequence SEQ
                                                                                                                                                                                           Tang
                                                                                                                                                                                                                                                                                      25-JAN-2001;
                                                                                                                                                                                                                                                                                                            02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                 WO200154477-A2
                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH98228 standard; cDNA; 891
                                                                                                                 Isolated polypeptide for treatment of antibodies and research use -
                                                                                                                                                           WPI; 2001-476164/51.
                                                                                            Claim 1; Page 236; 1275pp; English.
                                                                                                                                                                                                               (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAAAGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152
                                                                                                                                                                                           Ϋ́T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT
                                                                                                                                                                               Drmanac F
                                                                                                                                                  AAM23569
                                                                                                                                                                                                               HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCACCACGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                       2001WO-US02687.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                RA,
                                                                                                                                                                                           Zhou
                                                                                                                                                                                Zhang
                                                                                                                                                                                           ''
                                                                                                                                                                                Qian XB, Wang Z,
J, Werhman T;
                                                                                                                                                                                                                                                                                                                                                                                                                                 ij
                                                                                                                            diseases, diagnostics, raising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                 ë
                                                                                                                                                                                                                                                                                                                                                                                                                                 85
                                                                                                                                                                                            Chen R,
                                                                                                                                                                                            Asundi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
```

```
RESULT 9
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 330;
The present sequence is that of a novel nucleic acid that was assembled from human thymus cDNA library-derived Hyseq clone
                                                                                                          Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders,
                                                                                                                                                                                                                                                                      25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seguence
                                            Claim 1; Page 115; 119pp; English.
                                                                                             hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                           WPI; 2001-483233/52.
                                                                                                                                                                                                       Mize NK,
                                                                                                                                                                                                                                                                                                                    25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH26342 standard; cDNA; 891
                                                                                                                                                                                          Drmanac RT
                                                                                                                                                                                                                                                                                                                                                                                  WO200155332-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               neuroectodermal tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human growth regulatory-like polypeptide partial cDNA clone
                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCACCACGGATATTGACTTCTTCTGCGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCACCACGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÄÄCGTTAÄÄÄÄÄGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAÄÄÄAGAÄÄÄTGGÄGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                       Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP; 272 A; 146 C; 214 G; 259 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 330; DB 22; Length 891; 100.0%; Pred. No. 5.3e-97; tive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                         Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                       Arterburn MC, Tang YT,
                                                                                                                                                                                                         Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252
```

```
CC identification number 16372272 (see AAH26341). A recursive cc algorithm was used to extend the clone by pulling additional CC sequences from different databases. A full-length sequence (see CC AH26343) encoding novel human growth regulatory-like polypeptide CC (GRLP, see AAB82671) was subsequently obtained. Human GRLP CC belongs to the same protein family as growth regulatory proteins, CC growth factors, human melanoma derived growth regulatory proteins or melanoma inhibitory activity, cattle cartilage-derived cretinoic acid sensitive protein (CD-RAP, 44% identity and 64% CC retinoic acid sensitive protein (CD-RAP, 44% identity and 64% CC similarity over 126 amino acids) and other recinoic acid-sensitive proteins. GRLP polypeptides and polymucleotides of the invention CC can be used in the prophylaxia, treatment (including gene therapy) CC and diagnosis of disorders and diseases caused by, or involving, CC cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as CC gliomas. The polymucleotides can also be used to design probes CC and primers, for chromosome and gene mapping, in the recombinant CC production of protein, in the generation of antisense, ribozyme and CC peptide-nucleic acid molecules, and to produce transgenic animals. XX Sequence 891 BP; 272 A; 146 C; 214 G; 259 T; 0 other;
```

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                       301
                                                                              313
                                                                                                                   241
                                                                                                                                                            253
                                                                                                                                                                                                   181
                                                                                                                                                                                                                                        193
                                                                                                                                                                                                                                                                 121 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACCTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                       133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   330;
                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                     73
                                                                                                                                                                                                                                                                                                                                                                                                                         1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                      CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                            TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                          AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                       TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                            TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                     CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
CCCACCACGATATTGACTTCTTCTGCGAG
                                                                                                                                                            GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 330; DB 22; 100.0%; Pred. No. 5.3e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                   300
                                                                                                                                                                                                                                                                                                                         192
                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                     132
                                                                                                                                                                                                                                                                                                                                                                                                                                              6
                                                                                                                                                            312
                                                                                                                                                                                                                                          252
                                                                                                                                                                                                                                                                                 180
```

8 8 8 8 8 8 8 8

WO200102564-A1

Homo sapiens

MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.

Human MLP nucleotide sequence SEQ ID NO:29.

23-APR-2001

(first entry)

AAF59083 standard; DNA; 923

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                 S
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic anglogenesis. AAF59063 to AAF59099 and AAB69122 to AAB59132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 923 BP; 303 A; 147 C; 213 G; 260 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Page 99-100; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000;
                                             Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                  02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in the exemplification of the present invention.
                                                                                                 Human growth regulatory-like polypeptide cDNA.
                                                                                                                                                                                                  AAH26343 standard; cDNA; 1201 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                  388
                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                     268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACTATTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                        CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAATTTTGGGCTGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-JP04278
                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 330; DB 22; 100.0%; Pred. No. 5.4e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ohkubo S, Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 923;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           147
```

```
CDS
                                                                                                                                                                                                                                                                                     growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRIP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human growth regulatory-like polypeptide (GRLP, see AAB82671). The sequence was assembled using human thymus cDNA library-derived Hyseq clone identification number 16372272 (see AAH26341) as seed, using software programs to pull additional sequences from Hyseq's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous systems.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sig_peptide
                                                                                                                                                                                         gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme an peptide-nucleic acid molecules, and to produce transgenic animals. They may also have cytokine and cell proliferation or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proprietary database containing expressed sequence tag sequences, and by gel sequencing using primers to extend both 5' and 3' ends. The predicted protein has a mol.wt. of 14 kDa unglycosylated. GRI belongs to the same protein family as growth regulatory proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 115-116; 119pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200155332-A2
                                       arthritis and inflammation.
                                                       thrombolytic activity, use in cancer diagnosis and therapy, drug screening, receptor/ligand activity, antiinflammatory activity, and treatment of leukaemia, nervous system disorders
                                                                                                               differentiation activity, stem cell growth factor activity, haematopoiesis regulating activity, tissue growth activity, immunosuppressive or immunostimulant activity, activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence is that of a novel nucleic acid encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tay
33..101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= b
102..416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRLP
```

Query Match 100.0%; Best Local Similarity 100.0%; Matches 330; Conservative 0 0 Score 330; DB 22; Pred. No. 6.1e-97; Mismatches Length 1201; Indels .. Gaps

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
밁
        The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59122 to AAB59132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59080 standard; DNA; 330
                                                                                                                                                                                                    encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                         29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                       11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse MLP nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF59080;
                                                                                                                                                                                      promoters
                                                                                                                                                                                                                                             P-PSDB; AAB69127
                                                                                                                                                                                                                                                                                                     Itoh Y,
                                                                                                                                                                                                                                                                                                                                (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147
                                                                                                                                                                                                                                                           2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87
                                                                                                                                                                                     low-toxicity secretory cell function-regulatory protein ed DNA, applicable as drugs, in diagnosis and development ters and inhibitors for preventing or treating e.g. bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTCTC
                                                                                                                                                                                                                                                                                                      Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                            98;
                                                                                                                                                                                                                                                                                                     Ogi K,
                                                                                                                                         111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence SEQ ID NO:25
                                                                                                                                                                                                                                                                                                      Chkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               416
                                                                                                                                                                                                     0
                                                                                                                                                                                        joint
                                                                                                                                                                                                                                                                                                      ζ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   206
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 330 BP; 91 A; 60 C;
                                                                       Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                  MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                 cardiant; gene therapy; secretory
                                                                                                                                                                                                                                                                                                                                                                                                                     Mouse MLP nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF59068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF59068 standard; DNA; 384
                                                                                                                                                               Tanaka
                                                                                                                                                                            Itoh Y,
                                                                                                                                                                                                     (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                           30-JUN-1999;
                                                                                                                                                                                                                                                     29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                              11-JAN-2001.
                                                                                                                                                                                                                                                                                                      WO200102564-A1
                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                          2001-159271/16.
DB; AAB69125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                          Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCACCACGGATATTGACTTCTTCTGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                 93; 111pp; Japanese
                                                                                                                                                                                                                            99JP-0186718
                                                                                                                                                                          ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76.4%;
85.4%;
                                                                                                                                                                          Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 252.2; DB 22; Pred. No. 7.3e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO:10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                          joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
```

The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant

```
ភិត្តិកំពុក្ខិត្តិនិង្ស
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
AAF59084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Sim.
Matches 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 384 BP; 98 A; 68 C; 111 G; 107 T; 0 other;
Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                             MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                     WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                             Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse MLP nucleotide sequence SEQ ID NO:30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59084 standard; DNA;
                                                                                                                       Itoh
                                                                                                                                                         (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                         30-JUN-1999;
                                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                           WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                               inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76.4%;
Similarity 85.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAAATGGAGCT 180
                                                                                                                     Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGAGACGAGATGGGAGTCGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCACGGATATTGACTTCTTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCACCACGGATATTGACTTCTTCTGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATITCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                         99JP-0186718
                                                                                                                       Ohkubo s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 252.2; DB 22; Pred. No. 7.8e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                       Mogis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               329
                                                                                                                       Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 384;
                                                                                                                       Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
   joint
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            গু
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 281; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 947 BP; 279 A; 158 C; 221 G; 289 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diseases
                                                                                                                                                                                                                                           MLP; MIA; melancma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 2; Page 100-101; 111pp; Japanese
                                                                                                                                      11-JAN-2001
                                                                                                                                                                   WO200102564-A1
                                                                                                                                                                                                                                                                                                          Rat MLP nucleotide sequence SEQ ID NO:48.
                                                                                                                                                                                                                                                                                                                                          23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                     AAF59099 standard; DNA; 330
                                            (TAKE ) TAKEDA CHEM IND LTD
                                                                                                      29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185 GÁTGTCAÁGÁAÁGGGCAGCAGATCTÁTGTTTÁCTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCACCACGGATATTGACTTCTTCTGCGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAACCACGGATATTGACTTCTTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                ds.
                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                         99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 252.2; DB 22; Pred. No. 1.2e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               304
```

Nishi K,

ogi K,

Ohkubo S,

Mogi S,

Noguchi Y,

Yoshimura

```
g
                                                                                                                                                                             B
                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                     Ś
                                                                                                                              Ş
                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint disease promoters and thibitors angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-159271/16.
P-PSDB; AAB69131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 330 BP; 91 A; 62 C; 91 G; 86 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 12; Page 107; lllpp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             y Match 75.5%; Score 249; DB 22; Length 330;
Local Similarity 84.8%; Pred. No. 8e-71;
hes 279; Conservative 0; Mismatches 50; Indels
                                301 CCCACCACGGATATTGACTTCTTCTGCGA 329
                                                                                                                     241 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                               181
                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                     121
301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                      241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                        121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CATGGAATATTTAIGGACCGICTAGCTICCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                               GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGAGAGGAGTGGGAGTCGTGGGT 240
                                                                                                                                                                                                                                                                                                       AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                  TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Search completed: December 30, 2003, 02:14:32 Job time: 109.538 secs

71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl
71, Appl

```
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                               Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                           Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/US07 PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/US06 NEW PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06 NEW PUB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*

6: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*

7: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*

8: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

10: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

11: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

13: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

13: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

14: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

15: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

16: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

17: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

18: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

19: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

16: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

17: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

18: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*

19: /cgn2_6/ptodata/1/pubpna/US09_REW_PUB.seq:*
                                                     100.0
                                                                                                     100.0
                                                                                                                                                                          100.0
                                                                                                                                                                                                            100.0
                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-019-455A-23
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            December 30, 2003, 04:08:13 ; Search time 270.994 Seconds (without alignments) 4172.254 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 catggaatatttatggaccg.....atattgacttcttctgcgag 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2244575 seqs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                               DB
                                                                                                                     US-10-216-038-1

US-10-216-163-71

US-10-218-765-71

US-10-219-063-71

US-10-219-066-71

US-10-219-068-71

US-10-219-068-71

US-10-219-068-71

US-10-219-069-71
                 US-10-219-073-71

US-10-219-475-71

US-10-219-480-71

US-10-219-483-71

US-10-219-525-71

US-10-219-526-71
                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4489150
                                                                                                                                                                                                                                                                             Description
Sequence 1, Appli
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
Sequence 71, Appl
                                                                   US-10-216-038-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-216-038-1
                                                                                                                                                                                                    TITLE OF INVENTION: Methods and Materials Relating to No. US20030124573A1el Growth:
TITLE OF INVENTION: Polypeptides and Polynucleotides
FILE REFERENCE: HYS-7CIP
CURRENT APPLICATION NUMBER: US/10/216,038
CURRENT FILING DATE: 2002-08-08
PRIOR APPLICATION NUMBER: US 09/563,786
PRIOR FILING DATE: 2000-05-02
PRIOR APPLICATION NUMBER: US 09/491,404
PRIOR FILING DATE: 2000-01-25
NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/10216038 Publication No. US20030124573A1
                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Mize, Nancy K
APPLICANT: Boyle, Bryan
APPLICANT: Ford, John E
APPLICANT: Arterburn, Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                   FEATURE:
NAME/KEY: misc feature
LOCATION: (426)..(426)
                                                                                   OTHER INFORMATION: n =
                                                                                                                                                      TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                        LENGTH: 426
y Match 100.0%; Score 330; DB 15; Local Similarity 100.0%; Pred. No. 6.5e-100; hes 330; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                           Drmanac, Radoje T
Song, Yong
Sjaastad, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boyle, Bryan J
Ford, John E
Arterburn, Matthew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tang, Y Tom
Liu, Chenghua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              110000.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Radoje T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Þ
                                                                                     ŗ
                                                                                     ရ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-531-71
US-10-219-532-71
US-10-223-081-359
US-10-223-082-359
US-10-223-082-359
US-10-223-1884-71
US-10-223-18-331-71
US-10-230-13-71
US-10-230-13-71
US-10-218-631-71
US-10-218-631-71
US-10-218-631-71
US-10-218-631-71
US-10-218-631-71
US-10-218-631-71
US-10-218-64-71
US-10-219-076-71
US-10-219-075-71
US-10-219-075-71
US-10-219-464-71
US-10-219-468-71
US-10-219-468-71
US-10-219-468-71
US-10-232-231-71
US-10-232-233-71
US-10-232-233-71
US-10-232-233-71
US-10-232-233-71
US-10-232-233-71
US-10-233-256-71
US-10-233-256-71
US-10-233-256-71
US-10-231-956-71
US-10-219-468-71
                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                               Length 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
```

Matches 330;

Indels

0

Gaps

밁 Ş 8 S 맑 S 밁 S 밁

331

391

271

211

120

180

151

S

```
US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: P3530P1C3
CURRENT APPLICATION NUMBER: US/10/216,163
CURRENT APPLICATION NUMBER: 00/10/208-09
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR PFLICATION NUMBER: 00/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
                                            Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 71, Application US/10216163
Publication No. US20030149239A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mar
APPLICANT: Goddard, Audre
                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
ORGANISM: Homo Sapien
                            TYPE: DNA
                                                                                                                                                                                                        APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079294 FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-218-765-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 10/119/480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR PEPILORION NUMBER: 60/063549
PRIOR PELING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 71, Application US/10218765 Publication No. US20030187201A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 330; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mar APPLICANT: Goddard, Audre
                                                                            PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/218,765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3530P1C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match 100.0%; Score 330; DB 13; Local Similarity 100.0%; Pred. No. 7.2e-100;
                                                                            FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                           APPLICATION NUMBER: 60/079294
                                                                                                                                                                                APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
       FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/
                                                       APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACGTTAAAAAAGGGCAGGAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stephan, Jean-Philippe F. Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

. The state of the	
PRIOR PRIOR	PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR
12 12 16 16 16 16 16 16 16 16 16 16 16 16 16	
FILING DATE: APPLICATION FILING DATE:	APPLICATION APPLICATION APPLICATION APPLICATION FILING DATE FILING DATE FILING DATE FILING DATE FILING DATE
PPLICATION PPLICATION PPLICATION PPLICATION PILING DATE PPLICATION	PLING DATE PPLICATION DATE PPLICATION PPLICA
DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: ATION: DATE: DATE: ATION: DATE: DATE: ATION: DATE:	
FILING DATE: 1998-09- APPLICATION NUMBER: EFILING DATE: 1998-05- APPLICATION NUMBER: EFILING DATE: 1998-06- APPLICATION NUMBER: FILING DATE: 1998-06- APPLICATION NUMBER: FILING DATE: 1998-06- APPLICATION NUMBER: FILING DATE: 1998-06- APPLICATION NUMBER: FILING DATE: 1998-06- APPLICATION NUMBER: FILING DATE: 1998-06- APPLICATION NUMBER: FILING DATE: 1998-06- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-08- APPLICATION NUMBER: FILING DATE: 1998-09- APPLICATION NUMBER:	1998-0. NUMBER: 1998-0. NUMBER: 1998-0. NUMBER: 1998-0. NUMBER:
APPLICATION NUMBER: 60/6 FILING DATE: 1998-05-15 APPLICATION NUMBER: 60/6 FILING DATE: 1998-05-12 APPLICATION NUMBER: 60/6 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/6 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/6 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/6 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/6 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/6 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/6 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/6 FILING DATE: 1998-08-04 APPLICATION NUMBER: 60/6 FILING DATE: 1998-08-04 APPLICATION NUMBER: 60/6 FILING DATE: 1998-08-04 APPLICATION NUMBER: 60/6 FILING DATE: 1998-08-04 APPLICATION NUMBER: 60/6 FILING DATE: 1998-08-01 APPLICATION NUMBER: 60/6 FILING DATE: 1998-08-01 APPLICATION NUMBER: 60/6 FILING DATE: 1998-08-01 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-11 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-15 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE: 1998-09-16 APPLICATION NUMBER: 60/6 FILING DATE:	A. A. a. a.
5-15-15-15-15-15-15-15-15-15-15-15-15-15	10602201015
085579 085579 086532 089538 089905 0990557 090691	5 /081955 /082804 2 /084441 /085323
	w
PRIOR PRIOR	PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR
REKERKEREKEREKEREKEREKEREKEREKERE FIRET FOR FORTER FOR FORTER FOR	
FILLING DATA APPLICATIO APPLICATIO APPLICATIO APPLICATIO APPLICATIO APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO APPLICATIO APPLICATIO FILLING DATA APPLICATIO APPLICATIO APPLICATIO FILLING DATA APPLICATIO APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO FILLING DATA APPLICATIO APPLICATIO FILLING DATA APPLICATIO APPLICATIO APPLICATIO FILLING DATA APPLICATIO APPLICATIO APPLICATIO FILLING DATA APPLICATIO APPLICAT	APPLICATIO FILING DAT FILING DAT APPLICATIO FILING DAT FILING DAT FILING DAT APPLICATIO APPLICATIO
FILING DATE: APPLICATION N FILING DATE: APPLICAT	FILING DATE FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE FILING DATE APPLICATION
	2 M 2 M 2 M 2 M 2
1998-10 NUMBER: 1998-11 NUMBER: 1998-11 NUMBER: 1998-11 NUMBER: 1998-12 NUMBER: 1998-12 NUMBER: 1998-12 NUMBER: 1998-12 NUMBER: 1998-12 NUMBER: 1999-01 NUMBER: 1999-01 NUMBER: 1999-01 NUMBER: 1999-01 NUMBER: 1999-03 NUMBER: 1999-03 NUMBER: 1999-03 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-05 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-04 NUMBER: 1999-05 NUMBER: 1999-06 NUMBER: 1999-07 NUMBER:	: 1998-09 : 1998-09 : 1998-09 : 1998-09 : 1998-09 : 1998-10 : 1998-10
	. 6 . 6 . 6 . 6 . 6

R: 60/101786
R: 60/101916
R: 60/10192
R: 60/106178
R: 60/10624
R: 60/106464
R: 60/106905
R: 60/108787
R: 60/108891
R: 60/108891
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/113605
R: 60/1

R: 60/127887
-60/130232
R: 60/130232
-04-21
R: 60/131022
-60/131270
-60/131270
-60/131270
-704-27
-718: 60/131291
-718: 60/131291
-718: 60/131291

R: 60/134287
+05-14
+05-14
R: 60/140550
+06-22
+06-23
+06-23
+06-23
R: 60/14758
R: 60/145698
+07-26
R: 60/146222
R: 60/146963
R: 60/146963
R: 60/149330

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-219-480-71
                                                                                                    Ş
                                                                                                                                                  뭉
                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA; ORGANISM: Homo Sapien US-10-219-480-71
                     S
                                                               밁
                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 71, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/219,480
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/069873
FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1997-10-3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392 CCCACCACGATATTGACTTCTTCTGCGA 420
181 GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                    121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                  152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT 211
                                                                                                                                                                                                                                                                                                                      279; Conservative
                                                                                                                                                                                            61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                   92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                             1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                 AACGTTAAAAAAGGGCAGAACTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gurney, Austra -
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski, Paul J
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10219480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US20030187209A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Austin L.
                                                                                                                                                                                                                                                                                                                                          75.5%;
                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                        Score 249; DB 13; Length 521; Pred. No. 3e-76;
                                                                                                                                                                                                                                                                                                                        50; Indels
                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                Ś
                                                                                                                                                                                                                                                                                              ; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-483-71
                                                                                                                            당
                                                                                                                                                                    Ś
                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 71,
                                                                                                                                                                                                               Matches 279;
                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/079294 PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392 CCCACCACGATATTGACTTCTTCTGCGA 420
                                         152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT
121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/10219483
40. US20030187210A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                 75.5%;
84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                 Score 249; DB 1
Pred. No. 3e-76;
```

```
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P143 CURRENT APPLICATION NUMBER: US/10/219,483 CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGGTGTACCAGGAGGGCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                           1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                             CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                             DB 13; Length 521;
                                                                                                                                                                                                   50;
                                                                                                                                                                                                   Indels
                                                                                                                                                                                               0
                                                                 151
                                                                                                                                     60
```

Ś 밁 Ş 밁 S 밁

> 332 241 272 181

APPLICANT: APPLICANT:

APPLICANT: APPLICANT: APPLICANT:

331

391

```
; TYPE: DNA
; ORGANISM: Homo
US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/05913
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-21
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-21
PRIOR FILING DATE: 1997-10-21
PRIOR FILING DATE: 1997-10-21
PRIOR FILING DATE: 1997-10-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 71, Application US/10219525 Publication No. US20030187211A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: 93530P1C29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                            Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 300
                                   CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin I
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                         Sapien
                                                                                                                                                                  75.5%;
                                                                                                                                       Score 249; DB 13; Length 521; Pred. No. 3e-76; O; Mismatches 50; Indels
                                                                                                                                       0
                                                                                                                                       0
                                                                                                        ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뚱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-526-71
  Query Match 75.5%;
Best Local Similarity 84.8%;
Matches 279; Conservative
                                                                                                                                                                                      SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 71, Application US/10219526 Publication No. US20030187212A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watenabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3530P1C41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/069873 FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 GGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kevin P.
                                                                                                                                                                                                                                                                                                                                                   1998-03-26
Score 249; DB 13; Length 521; Pred. No. 3e-76; o; Mismatches 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND NUCLEIC
```

밁 Ś

92

0

. • Gaps

0

Matches Query Match

NO 71

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR PRIOR DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                      SEQ ID NO 71
LENGTH: 521
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 71, Application US/10219530 Publication No. US20030187213A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C54 CURRENT APPLICATION NUMBER: US/10/219,530 CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                             PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
ORGANISM: Homo Sapien
                                                                                                                                                                                        APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Au-
Gurney, Au-
Toan-p)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCCAGCAACTTGGTTAGAGAGCCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGCATGTTTATGGATAAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
```

```
멍
   밁
                                   Ś
                                                                        밁
                                                                                                         Ş
                                                                                                                                                                              Ş
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
   392
                                     301
                                                                        332
                                                                                                                                               272
                                                                                                                                                                                  181
                                                                                                                                                                                                                     212
                                                                                                                                                                                                                                                                                          152
                                                                                                           241
                                                                                                                                                                                                                                                     121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT 180
                                                                                                                                                                                                                                                                                                              61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                   92
                                                                                                                                                                                                                                                                                                                                                                                                  1 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 60
                          CCAACCACGGATATTGACTTCTTCTGTGA 329
CCCACCACGGATATTGACTTCTTCTGCGA 420
                                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                         TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT 300
                                                                                                                                             GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                              GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGT 240
                                                                                                                                                                                                                  AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAATGGAGCT
                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 249; DB 1:
Pred. No. 3e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13; Length 521;
                                                                                                                                                                                                                                                                                                                                                                                                                                    50;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                          211
                                                                                                                                                                                                                                                                                                                                                                 151
```

Search completed: December 30, 2003, 10:03:04 Job time: 271.994 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perfect score:
                                    0000
         22544
2254
23654
24654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
25654
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                December 30, 2003, 01:34:27; Search time 26.6527 Seconds (without alignments) 5464.997 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           654321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-48
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        569978 segs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 catggcatgtttatggataa.....atattgacttcttctgtgaa 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Issued_Patents NA:*

1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18.9
         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd
      US-08-578-649-4
US-08-578-649-1
US-08-578-649-8
US-08-578-649-8
US-08-578-649-3
US-08-578-649-3
US-08-578-649-3
US-08-578-649-3
US-08-578-649-3
US-08-177-628-1
US-08-177-628-1
US-08-177-171
US-08-180-031-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-1
US-09-080-715-7
US-09-080-715-7
US-09-080-715-7
US-09-080-715-7
US-09-080-715-7
US-09-080-715-7
US-09-080-718-575-3
US-08-481-206-3
US-08-481-206-3
US-08-481-206-3
US-08-481-206-3
US-08-481-206-3
US-08-117-7114-136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 4, Appli
Sequence 1, Appli
Sequence 18, Appli
Sequence 8, Appli
Sequence 24, Appli
Sequence 3, Appli
                             Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
3, Appli
3, Appli
3, Appli
136, Appli
136, App
                                                                                                                                                            14, Appli
1, Appli
2, Appli
3, Appli
4, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
2, Appli
3, Appli
2, Appli
3, Appli
4, Appli
5, Appli
6, Appli
6, Appli
6, Appli
7, Appli
7, Appli
7, Appli
8, Appli
9, Appli
9, Appli
9, Appli
9, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
2, Appli
2, Appli
2, Appli
3, Appli
4, Appli
4, Appli
5, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6, Appli
6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-578-649-4
```

O	a	O	a	a	O	ი	O	O	O			a	O	ი			
45	44	43	42	41	40	39	38	37	36	35	۵ 4	ω ω	32	31	30	29	28
27.8	28	28	28	28	28	28	28	28	28	28.2	28.4	28.6	•		29.2	٠	29.2
8.4	8.5	8.5	8.5	8.5		8.5		8.5				8.7	8.7	8.8	8.8	8.8	8.8
1778	4411529	4403765	2938	2938	2938	2938	2938	1108	1108	647	1136	2649	681	1230025	10136	10136	8789
_	w	w	4.	4	4	w	w	4.	4,	2	W	4.	ហ	4.	თ	_	μ
US-08-416-870C-3	US-09-103-840A-1	US-09-103-840A-2	US-09-768-670-3	US-09-553-875-3	US-09-710-481-3	US-09-120-025-3	US-08-969-815-3	US-09-736-457-1249	US-09-702-705-1249	US-08-392-771-20	US-08-860-820-1	US-08-400-067-2	PCT-US96-10602-13	US-09-198-452A-1	PCT-US95-16216-2	บร-08-353-700-2	US-08-328-254-5
Sequence 3, Appli	Sequence 1, Appli	Sequence 2, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 1249, Ap	Sequence 1249, Ap	Sequence 20, Appl	Sequence 1, Appli	Sequence 2, Appli	Sequence 13, Appl	Sequence 1, Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 5, Appli

ALIGNMENTS

```
Sequence 4, Application US/08578649
PATENT NO. 5770366
GENERAL INFORMATION:
APPLICANT: Ulich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                           COMPUTER READJABLE FORM:

MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskett
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION NUMBER: DE P43 24 247.2
PRIOR APPLICATION NUMBER: DE P43 24 247.2
PRIOR APPLICATION NUMBER: DE P43 24 247.2
APPLICATION NUMBER: DE P43 24 247.2
REPERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELEPHONE: (212) 688-9200
TELERAN: (212) 688-9200
                                                                                                                                                                                                               TELEFAX: (212) 838-3884 INFORMATION FOR SEQ ID NO:
                                    NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 581 base pairs
TYPE: nucleic acid
                                                                                        MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: OUT YORK
NAME/KEY:
                                                                                                                                         STRANDEDNESS: single
                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                 CDS
110..499
sig_peptide
110..178
                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Felfe & Lynch
                                                                                                                                                                                                                 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mb storage diskette
```

US-08-578-649-4

LOCATION: NAME/KEY:

Query Match

```
Matches 174; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                     TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                   NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                             FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                    TELEPHONE: (212) 838-3884
                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132 AGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTG 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184 TATGCCCAAGCTGGCTGACTGGAAGCTGTGTGCGGACGAATGCAGCCATCCTATCTC 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12 TATGGATAAACTTTCTTCTAAGAAGTTGTGTGTGCAGATGAGGAGTGTGTCTATACCATTTC 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAATGGGATTTCTACTG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGATATTGACTTCTTCTG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTAGCATTGTCCGGGAGGACCTGAACTCGAAACCTGGCAAAATTGATATGAAGACCGA 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATTCCAACCAC 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGAGGCAGTGTTCAGGGAGGTTACTATGGAGACCTGGCAGCCCGCCTGGGCTATTTCCC 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGA---ATTGTGGGTTATTTCCC 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGCCAAGTGGTGTATGTCTTCTCCAAGTTG-----AAGGGCCGTGGGCGCCTTTTCTG 357
    : 459 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/08578649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mat_peptide
179..499
                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                             PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 64; DB 1; Length 581; Pred. No. 2.6e-12; O; Mismatches 135; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 19.2%;
Best Local Similarity 58.2%;
Matches 153; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 18, Application US/08578649
Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: ANGLEW L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inc
COMPUTER: IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                     SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: single
                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                         FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117 TATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCACCCTATCTC 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              132 AGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTG 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177 CATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCG 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12 TATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTC 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72 TCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAA 131
                                                                                                                                                                                                                                                                                                                                                                   10022
                                                                                                                                                                                                                                                                                                                                                                                       New York
(: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTAGCATTGTCCGAGAGGACC 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAACTTGGTTAGAGAGCAAC 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGAGGCAGCGTTCAGGGAGATTACTÁTGGAGÁTCTGGCTGGCTGGGCTATTTTCCC 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATT---GTGGGTTATTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCCGCTCTTCTG 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                         805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mat_peptide
112..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Third Avenue
                                                                                                                                                                                                                                                                                                                         inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                 PC-DOS
                                                                                                                                DE P 43 24 247.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 63.4; DB 1; Length 4
Pred. No. 3.7e-12;
0; Mismatches 101; Indels
                          BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 459;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ν
```

B

358 192

Ş 밁

밁 Ś

Ś

478

US-08-578-649-1 RESULT 2

Sequence 1, Apprice Patent No. 5770366

GENERAL

STREET:

COUNTRY: CITY: New York

USA

10022

COMPUTER:

TYPE: r

Ş В Ś 밁 S

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 8, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                   SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
LOCATION:
                                                                                                                                                                                   COMPUTER: IBM PS/
OPERATING SYSTEM:
                                                                                                                                                                                                          MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette COMPUTER: IBM PS/2
                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                   STREET: 805 Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_RNA
LOCATION: 4..6
OTHER INFORMATION: /function= "Startcodon Met"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 330 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133 GGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTGG 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250 AGCAACTTGGTTAGAGAGCAAC 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187 GGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGCTATTTCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193 GCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATT---GTGGGTTATTTCCCC 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133 GGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGG 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73 ATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGG 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73 CTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 ATGCCAAAATTAGCAGATCGTAAATTATGTGCAGATCAGGAGTGCAGCCACCCTATCTCC 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13 ATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTAGCATTGTCCGAGAGGACC 268
                                                                                                                                                                                                                                                                                                                  New York
                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                         805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mat_peptide 7..327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18.9%;
                                                                                                                                                                                         PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 62.4; DB 1;
Pred. No. 7e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246
```

```
RESULT 5
US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                        Sequence 24, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 141; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 8: SEQUENCE CHARACTERISTICS: LENGTH: 305 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOTTELECOMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEPAX: (212) 838-3884
                                                              COMPUTER READABLE FORM:
                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
COMPUTER: IBM PS/
OPERATING SYSTEM:
                                                                                                                         STREET: 805 Third Avenue
CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_RNA
LOCATION: join(1..29, 277..305)
OTHER INFORMATION: /function= "Primer"
                                            MEDIUM TYPE:
                                                                                                        COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME:
                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match 17.4%;
Local Similarity 58.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 C 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       271 C 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 TACTATGGAGATCTGGTCGCCTGGGCTATTTTCCCCAGTAGCATTGTCCGAGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      214 CACCAGGATGAGATGGGAATT---GTGGGTTATTTCCCCAGCAACTTGGTTAGAGAGCAA 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154 TCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGAC 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34 AAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCTCTGGCAAGAGCACAGGAAGAC 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67 TACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94 TACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTAT 153
                                                                                        10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H: 305 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTTTTCGGCGGATCAGGAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCCTTCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Andrew L. Tiajoloff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAAGCTG-----AAGGGCCGTGGGCGCTCTTCTGGGGAAGCCAGCGTTCAGGGAGAT
                         IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                    Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA
                                              ω
.
                                              inch 1.44 Mb storage diskette
      PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 57.4; DB 1;
Pred. No. 3.6e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66
```

CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
FILING DATE: 20-July

20-July-1993

DE P 43 24 247.2

SOFTWARE: Wordperfect CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-578-649-24
                                                                                                                                                                                                                                                                                                 US-08-578-649-3
                                                                                                                                                                                                                                                           Sequence 3, Application US/08578649
Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 596 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEPAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 24:
                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Brigitte Kaluza
APPLICANT: Brigitte Kaluza
APPLICANT: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                       NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: -
LOCATION: one-of(194, 369, 527)
LOCATION: one-of(194, 369, 527)
OTHER INFORMATION: /note= "N in positions 194, 369
OTHER INFORMATION: and 527 denotes an indefinite number and sequence
OTHER INFORMATION: of nucleotides "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                  STATE:
                                                                                      CITY:
                                                                                                     STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                      277
                                                                                                                                                                                                                                                                                                                                                                                                      125 TCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTG 162
                                                                                                                                                                                                                                                                                                                                                                                                                                         217 CTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCCGACTGCCGATTCCTGACCA 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           65 CCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATG 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59; Conservative
                                     10022
                                                                                      New York
                                                                                                                                                                                                                                                                                                                                                                      TTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG 314
                                                                    New York
                                                                                                        805 Third Avenue
                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    549..569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
214..347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
40..111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..569)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       join(40..111, 40..166, 214..347, 393..503, 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         393..503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40..166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 35.6; DB 1; Length 596; Pred. No. 0.016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
Ś
                                                                                                                                                                      뭉
                                                                                                                                                                                                     Ś
                                  US-08-232-463-14/c
                                                                                                                                                                                                                                                                                                         US-08-578-649-3
Sequence 14, Application US/08232463 Patent No. 5670367
                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: BOER 1035-PFF
REFERENCE/DOCKET NUMBER: BOER 1035-PFF
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (212) 838-388 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM: PC-D
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (212)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                        LOCATION: one-of(2216)
OTHER INFORMATION: /note= "N in position 2216
OTHER INFORMATION: denotes an indefinite number ans sequence of
OTHER INFORMATION: nucleotides"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic actu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER:
                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OCATION:
                                                                                                   1649 TTCACCGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG 1686
                                                                                                                                                                      1589 CTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCGACTGCCGATTCCTGACCA 1648
                                                                                                                                    125 TCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTG 162
                                                                                                                                                                                                       65 CCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCCGGACTGTAGGTTCATCAATG 124
                                                                                                                                                                                                                                      59;
                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sig_peptide
1378..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                              3232..3252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
2804..2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1586..1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1378..1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       838-3884
                                                                                                                                                                                                                                                        10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         u.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BOER 1035-PFF/ALT
                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                        Score 35.6; DB 1; Length 3565; Pred. No. 0.04;
                                                                                                                                                                                                                                          39;
                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                          0
```

0

GENERAL INFORMATION:
APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52

CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500

CITY: Alexandria

٧A

22313-0299

USA

```
US-08-232-463-14
                                                                                                                                                                               Sequence 1, Application US/08167628 Patent No. 5408040
                                                                    GENERAL INFORMATION:
APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
APPLICANT: Bradham Jr., Douglas M.,
APPLICANT: BOTOMECTIVE TISSUE GROWTH FACTOR
NUMBER OF SEQUENCES: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: 899149
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IRD PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 30
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)336-9300
                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 26-AUG-1991 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
PRIOR APPLICATION DATA:
        ADDRESSEE: Spensley Horn Jubas & Lubitz STREET: 4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.9%; Score 32.8; DB 1; Length 7218;
Local Similarity 3.5%; Pred. No. 0.53;
Nes 10; Conservative 157; Mismatches 119; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/232,463 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               253 AACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGA 298
                                                                                                                                                                                                                                                                                                                                                                                                                                   193 GCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGTTATTTCCCCCAGC 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133 GGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCTGGGGCATTCTGG 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73 CTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATCAATGTCAAGAAA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13 ATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTCTATACCATTTCT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                            7218 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephen A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP 91 114 300.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                            ; Sequence 1, Application US/08386680
; Patent No. 5585270
                                                                                                                                                                                                                                                                                                                                                                   US-08-386-680-
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-167-628-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR
                                                                                       STREET: 422.
STREET: 422.
CITY: La Jolla
TTATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: line MOLECULE TYPE: c
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Wetherell, Jr. Ph.D., John W
REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: PD-1294
                                                                                     COUNTRY:
                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 9.6%;
Local Similarity 53.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/167,628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 619-455-5100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1474 GTATCA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1414 GCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCGGCCCGGTTA 1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1354 TTCCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACACA 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219 GGATGA 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                159 GCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99 TGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGCAGATCTATGTTTATTCCAA
                                                                 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB60R32
                                                                                                                                                E: Spensley Horn Jubas & Lubitz
4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2075 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                619-455-5110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
130..1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/07/752,427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 31.6; DB 1; Length 2075; Pred. No. 0.74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

158

Matches Query Match

IMMEDIATE SOURCE:

TOPOLOGY:

linear

STRANDEDNESS:

LENGTH:

TELEFAX:

TELEPHONE:

FILING DATE:

RESULT 8 US-08-167-628-1

ş 밁 Ś 밁 Ş B

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-459-717-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-386-680-1
                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/08459717
Patent No. 5770209
GENERAL INFORMATION:
APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR
NUMBER OF SEQUENCES: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: line MOLECULE TYPE: c IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Wetherell Jr. Ph.D., John W. REGISTRATION NUMBER: 31,678
REFERENCIOCKET NUMBER: PD-1294
TELECOMMUNICATION INFORMATION:
                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                    CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/07/752,427 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/386,680 FILING DATE: 10-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLONE: DB60R32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/167,628
                                                                                                                                                                                                                                                         ADDRESSEE: Spensley Horn Jubas & Lubitz STREET: 4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 9.6%; Score 31.6; DB 1; Length 2075; Local Similarity 53.2%; Pred. No. 0.74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: single
FILING DATE:
                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1474 GTATCA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1414 GCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCGGCCCGGTTA 1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1354 TTCCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACACA 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            159 GCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     219 GGATGA 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99 TGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAA 158
                                                                                                                                                                                                               La Jolla
: CA
                                                                                                                                                                         92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic acid
                                                                                                                                                                                             Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           619-455-5110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    130..1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    619-455-5100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA
                                                                                                                        Floppy disk
  02-JUN-1995
                 US/08/459,717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

GENERAL INFORMATION:

APPLICANT: Grotendorst, Gary R.

APPLICANT: Bradham Jr., Douglas M.,

APPLICANT: Bradham Jr., Douglas M.,

TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR

NUMBER OF SEQUENCES: 2

CORRESPONDENCE ADDRESS:

ADDRESSEE: Spensley Horn Jubas & Lubitz STREET: 4225 Executive Square, Suite 1400

La Jolla

Ç

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:

COMPUTER READABLE FORM: MEDIUM TYPE: Floppy

COUNTRY:

S

92037

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 10-FEB-1995

US 08/386,680

APPLICATION NUMBER: US/08/167,628 FILING DATE: APPLICATION NUMBER: US/07/752,427

FILING DATE: 11-SEP CLASSIFICATION: 435

APPLICATION NUMBER: US/08 FILING DATE: 11-SEP-1996

US/08/712,302

```
В
                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                            Ś
                                                                                                             밁
                                      US-08-712-302-1
                                                        RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                US-08-459-717-1
Sequence 1, Application US/08712302
Patent No. 5783187
                                                                                                                                                                                                                                                                                                                       Matches 67; Conservative
                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 619-455-5110
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 2075 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: c
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: PD TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Wetherell, Jr. Ph.D., John W. REGISTRATION NUMBER: 31,678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 619-455-5100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                1414 GCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCGGCCCGGTTA 1473
                                                                                                             1474 GTATCA 1479
                                                                                                                                                                                                                                                     1354 TTCCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACACA 1413
                                                                                                                                             219 GGATGA 224
                                                                                                                                                                                                                 159 GCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCA 218
                                                                                                                                                                                                                                                                                      99 TGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAA 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB60R32
                                                                                                                                                                                                                                                                                                                                                                                                              130..1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                                                                     9.6%; Score 31.6; DB 1; Length 2075; 53.2%; Pred. No. 0.74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 07/752,427
                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                          59; Indels
                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                          Gaps
```

FILING DATE:

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-880-031-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-712-302-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/08880031 Patent No. 5916756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/880,031
                NAME: Wetherell, Jr. Ph.D., John W. REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: PD-1294
TELECOMMUNICATION INFORMATION:
                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                    STREET: %1.
STREET: %2.
CITY: La Jolla
CMATE: CA
                                                                                                                                  PRIOR APPLICATION DATA: US/08/167,628
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Wetherell, Jr. Ph.D., John W.
REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: PD-1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: 619-455-5100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
TELEPHONE:
                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                ZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 9.6%;
Local Similarity 53.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1474 GTATCA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1354 TICCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACACA 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1414 GCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCGGCCCGGTTA 1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219 GGATGA 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  159 GCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99 ТСССССССЭЛСТЭЛАССТТСАТСАЛСТАЛСТАЛСДАЛАСССАССАСТСТАТСТТАТТССАА 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB60R32
                                                                                                                                                                                                                                                                                                                                                                                                                            4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2075 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       619-455-5110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130..1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
619-455-5100
                                                                                                                                                                                                                                                                                                                                                                                                                                            Spensley Horn Jubas & Lubitz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 31.6; DB 1; Length 2075; Pred. No. 0.74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
US-09-097-179-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-880-031-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Appli
Patent No. 614991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
TELEPHONE: 619-455-5100
TELEFAX: 619-455-5110
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR
NUMBER OF SEQUENCES: 2
                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 619-455-5100
                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 10-FEB-
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/097,179
                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: """
STREET : """
CITY: La Jolla
""ATE: CA
"""
                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                          NAME: Wetherell, Jr. Ph. REGISTRATION NUMBER: 31, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
LOCATION:
                                                                                                                                                                 FILING DATE: US/07/752,427
                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 9.6%;
Local Similarity 53.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1474 GTATCA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1414 GCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCGGCCCGGTTA 1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1354 TTCCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACACA 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219 GGATGA 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    159 GCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99 TGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAA 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09097179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB60R32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2075 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                619-455-5110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130..1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Spensley Horn Jubas & Lubitz
25 Executive Square, Suite 1400
                                                                                                                                                                                                                         UMBER: US 08/386,680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    single
                                                                                  31,678
                                                                                                                                                                                                      US/08/167,628

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 31.6; DB 2; Length 2075; Pred. No. 0.74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

SEQUENCE CHARACTERISTICS:

```
US-09-080-715-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-097-179-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09080715 Patent No. 6190884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                 ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
NAME: Wetherell, Jr. Ph.D., Jc
NAME: Wetherell, Jr. Ph.D., Jc
REGISTRATION NUMBER: 31,678
REBERECEL/DOCKET NUMBER: PD-1:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-455-5100
                                                                                    TELEFAX: 619-455-5110
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/080,715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: CDNA IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Grotendorst, Gary R. APPLICANT: Bradham Jr., Douglas M., TITLE OF INVENTION: CONNECTIVE TISS
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                    FILING DATE:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLONE:
                              STRANDEDNESS:
                                                  TYPE:
                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
               TOPOLOGY:
                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1474 GTATCA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1414 GCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCGGCCCGGTTA 1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1354 TTCCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACACA 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 159 GCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          219 GGATGA 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99 TGCCCCGGACTGTAGGTTCATCAATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAA 158
                                              H: 2075 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB60R32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2075 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
130..1177
           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Spensley Horn Jubas & Lubitz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9.6%;
53.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONNECTIVE TISSUE GROWTH FACTOR
                                                                                                                                                                                                                                                                    US/07/752,427
                                                                                                                                                                                                                                                                                                        US/08/167,628
                                                                                                                                                                                                                Ph.D., John W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 31.6; DB 3; Pred. No. 0.74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; LOCATION:
US-09-080-715-1
                                                                                             US-09-142-569-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-142-569-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 7, Application Patent No. 6413735
GENERAL INFORMATION:
                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                   TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IMMEDIATE SOURCE:
CLONE: DB60R32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                OTHER INFORMATION: "CTGF cDNA coding sequence" SEQUENCE DESCRIPTION: SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1474 GTATCA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Lau, Lester F. TITLE OF INVENTION: Extracellular Matrix Signalling Molecules
                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                         MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1414 GCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCGGCCCGGTTA 1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1354 TTCCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACACA 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  219 GGATGA 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159 GCTGGTAACAGAAAATGGAGCTGGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99 ТССССССБАСТСТАССТТСАТСЛАТСТАЛЬСЛАВСАССАССАСАТСТАТСТТТАТТССАА 158
                                                                                                                                   NAME/KEY: misc feature OTHER INFORMATION: "C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/09/142,569
FILING DATE: 02-Apr-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09142569
                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 28758/33766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Clough, David W. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun STREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: 312/474-6300
TELEFAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Chicago
                                                                                                                                                                                                                                                                                                LENGTH: 2075 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Marshall,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130..1177
                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.6%; Score 31.6; DB 3; Length 2075; 53.2%; Pred. No. 0.74;
9.6%; Score 31.6; DB 4; Length 2075;
53.2%; Pred. No. 0.74;
ive 0; Mismatches 59; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36,107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

Best Local Similarity

53.2%;

0

0

Matches 67; Conservative

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                 ö.
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                             71...
                                                                                                                                                                                                                                                                               Score
67.5
67.5
                                                                                                                                                                   73.5
73
                                   89
89
89
                                                                        00000
                                                                                                                                                                                                        75
                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                             length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length:
                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December 29, 2003, 16:03:18; Search time 11.4006 Seconds (without alignments) 927.898 Million cell updates/sec
                                                                       Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          283308 segs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-49
                                                                                                                                                                                                                                                                                                                                                                                                       PIR_76:*
                                                                                                                                                                                                                                                                                                                                                                                                                        Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                   Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                 pir2:*
pir3:*
pir4:*
                                                                                                                                                                                                                                                                                                                                                                                             pir1:*
                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                        1589
413
1215
                                                                        1097
                                                                                         878
                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 100%
                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96168682 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapext 0.5
                                 F70469
AF2340
T06793
T31504
G86746
A55628
G96719
G71691
       T39655
A84055
T02693
                                                                                                            C90364
B83966
                                                                                                                             S67383
C81920
G96995
S68178
T48525
$24550
                                                                                                                                                                                                                                  TVHUVV
I51940
                                                                                                                                                                                                                                                     TVMSVV
138019
                                                                                                                                                                           A53800
                                                                                                                                                                                                                                                                                ID
                                                                                                                                                                                      T21356
                                                                                                                                                                                              S66662
                                                                                                                                                                                                        T32734
                                                                                                                                                                                                                 T31051
                                                                                                                                                                                                                           RGBYC5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         283308
       S-receptor kinase
                transcription regu
                                                                               sugar ABC transpor
receptor kinase ho
                                                                                                                                                                mixed-lineage prot
probable signal tr
                                                                                                                                                                                                                       gene VAV2 protein cell division cont
                                           probable chromomet
                                                     translation initia
                                                             hypothetical
                                                                     hypothetical prote
                                                                                                 enolase-phosphatas
                                                                                                                             hypothetical
                                                                                                                                     mixed-lineage prot
                                                                                                                                             hypothetical prote ATP-dependent RNA
                                                                                                                                                                                             protein-glutamine
                                                                                                                                                                                                      myosin-IA - Acanth
                                                                                                                                                                                                              transposase homolo
                                                                                                                                                                                                                                           transforming prote
                                                                                                                                                                                                                                                   transforming
                                                                                                                                                                                                                                                             melanoma-derived
                                                                                                                                                                                                                                                                              Description
                                  nypothetical prote
                                                                                                          formate dehydrogen
                                                                                                                                                                                   hypothetical prote
                                                                                                                    ransposase ISC133
                         domain contain
                                                             prote
                                                                                                                            prote
```

	45	44	2 6	41	40		86	37	36	35	34	ω ω	32	31	30
	65.5	ი ი 	η σ η υ η υ	65.5	66	66	66	67	67	67	67	67	67.5	67.5	67.5
	11.1		11.	11.1	11.2	11.2	11.2	11.3	11.3	11.3	11.3	11.3	11.4	11.4	11.4
	383	277	227	164	1173	639	415	816	541	259	229	229	1560	618	506
	N	o,	אנ	N	N	N	N	N	N	N	N	N	N	N	ь
ALIGNMENTS	\$24156	36380S	T29531	F96968	T08610	T13151	AG0391	T17257	C64439	C64427	E97518	AG2737	T30282	G59432	S24553
	polygalacturonase	copper Abc cranspo	hypothetical prote	hypothetical prote	major core capsid	adapter protein CM	conserved hypothet	hypothetical prot	asparagine synthas	hypothetical prote	probable acetyltra	acetyltransferase	calcium-binding pr	MacGAP protein [im	protein-tyrosine

R;Katzav, S.; Cleveland, J.L.; Heslop, H.E.; Pulido, D.
Roll. Biol. 11, 1912-1920, 1991
A;Title: Loss of the amino-terminal helix-loop-helix domain of the vav proto-oncogene A;Reference number: A39576; MUID:91172176; PMID:2005887
A;Accession: A39576 transforming protein vav - mouse (Cyspecies: Mus musculus (house mouse) C;Date: 03.May-1994 #sequence revision 16-Feb-1996 #text_change 18-Jun-1999 C;Accession: A61187; A39576; \overline{S36941}; S23669 R;Coppola, J.; Bryant, S.; Koda, T.; Conway, D.; Barbacid, M. Cell Growth Differ. 2, 95-105, 1991 A;Title: Mechanism of activation of the vav protooncogene. A;Reference number: A61187; MUID:91299578; PMID:2069873 A;Accession: A61187 A;Status: not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-844 <COP> melanoma-derived growth regulatory protein MIA - human (;Species: Homo sapiens (man) (;Species: Homo sapiens (man) (;Date: 17-May-1996 #sequence_revision 17-May-1996 #text_change 04-Mar-2000 (;Accession: 138019; S40238 R;Blesch, A.; Bosserhoff, A.K.; Apfel, R.; Behl, C.; Hessdoerfer, B.; Schmitt, A.; Jack Cancer Res. 54, 5695-5701, 138019; MID: 35007612; PMID: 7923218 A;Reference number: 138019; MUID: 95007612; PMID: 7923218 밁 B A;Accession: I38019
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-131 <RES> A;Molecule type: mRNA S Ś A;Gene: mia C;Superfami A;Cross-references: EMBL:X75450; NID:g438057; PIDN:CAA53203.1; PID:g438058 138019 ;Superfamily: human melanoma-derived growth regulatory protein MIA Matches Best ;Genetics: Query Match Local 84 WGGSVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131 64 WAGSVYGDHODEMGI-VGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110 27 MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF 5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF 63 50; Similarity Conservative 44.8%; Score 264.5; DB 2 46.3%; Pred. No. 4.8e-21; 46.3%; 23; Mismatches DB 2; Length 131; 30; Indels ຫ ••• Gaps

```
A; Molecule type: mRNA
A; Residues: 62-839 «KAT2»
A; Cross-references: EMBL:X16316
R; Adams, J.M.; Houston, H.; Allen, J.; Lints,
Oncogene 7, 611-618, 1992
                                                                                                                                                                                                 A;Cross-references: GB:M59834; NID:g340189; PIDN:AAA63267.1; PID:g340190
A;Note: the authors translated the codon CAA for residue 6 as Glu, CAG for residue 13 as R;Katzav, S.; Martin-Zanca, D.; Barbacid, M.
EMBO J. 8, 2283-2290, 1989
A;Title: vav, a novel human oncogene derived from a locus ubiquitously expressed in hems A;Reference number: S05382; MUID:90005432; PMID:2477241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Katzav, S.; Cleveland, J.L.; Heslop, H.E.; Pulido, D. Mol. Cell. Biol. 11, 1912-1920, 1991
A;Titl=: Loss of the amino-terminal helix-loop-helix domain A;Reference number: A39576; MUID:91172176; PMID:2005887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Homo sapiens (man)
C;Date: 31-Mar-1991 #sequence_revision 03-May-1996 #text_change 18-Jun-1999
C;Accession: B39576; S05382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transforming protein vav - human (fragments) N;Alternate names: finger protein vav C;Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: The hematopoietically expressed vav proto-oncogene shares homology with the db A;Reference number: S23669; MUID:92228488; PMID:1555462
A;Contents: annotation; the authors note the frameshift difference with sequence in A61
A;Note: the complete sequence was submitted to Genbank; see S36941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Residues: 1-323,'DLLMVPMQRVLKYHLLLQELVK',346-347,'QDAT',352,'K',354,'N',355-453,'R',45
A;Cross-references: EMBL:X64361; NID:g55220; PIDN:CAA45713.1; PID:g55221
R;Adams, J.M.; Houston, H.; Allen, J.; Lints, T.; Harvey, R.
Oncogene 7, 611-618, 1992
                                                                                                                                                                             A; Accession: S05382
                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-61 <KAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;606-609/Region: proline-rich
F;670-761/Domain: SH2 homology <SH2>
F;788-836/Domain: SH3 homology <SH3B>
F;788-836/Domain: SH3 homology <SH3B>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;515-563/Domain: protein kinase C zinc-binding F;528-548/Region: zinc finger CCCC motif F;553-566/Region: zinc finger HCCH motif F;575-582/Region: nuclear location signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Adams, J.M. submitted to the EMBL Data Library, January 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: B39576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;336-340/Region: proline-rich
F;486-493/Region: nuclear location signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;194-458/Domain: CDC24 homology <CD24>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superfamily: vav transforming protein; CDC24 homology; protein kinase C zinc-binding C;Keywords: phosphoprotein; transforming protein; zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: S36941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: S36941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Residues: 1-28,'E',30-93 <KAT>
A;Cross-references: GB:MS9833; NID:g202343; PIDN:AAA63402.1; PID:g202344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;604-654/Domain: SH3 homology <SH3A>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;132-176/Region: acidic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;32-102/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86 LVREQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                leucine-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 0.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 93.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -KILNKKGQQGWWRGEIYGR----IGWFPSN 834
                                 T.; Harvey,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat homology <KZ1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 844;
                                            æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of the vav proto-oncogene ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13;
                                                                                                                                                                                                                                                                                                                                  for residue 13 as
```

유성

862 GRIGWFPSTYVEEEGI 877

77 GIVGYFPSNLVREORV 92

```
밁
                                                       Ş
                                                                                                                                                                                                                                                               A;Map position: 9q34-9q34
C;Superfamily: vav transforming protein; CDC24 homology; protein kinase C zinc-binding
F;198-462/Domain: CDC24 homology <CD24>
F;524-572/Domain: protein kinase C zinc-binding repeat homology <KZ2>
F;673-764/Domain: SH2 homology <SH2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Henske, E.P.; Short, M.P.; Jozwiak, S.; BUVEY, C.F., CHARLES, Short, M.P.; Jozwiak, S.; BUVEY, C.F., CHARLES, C. Ann. Hum. Genet. 59, 25-37, 1995
A;Title: Identification of VAV2 on 9q34 and its exclusion as the tuberous sclerosis A;Title: Identification of VAV2 on 9q34 and its exclusion as the tuberous sclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene VAV2 protein - human
C;Species: Homo sapiens (man)
C;Date: 01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;126-170/Region: acidic
F;188-452/Domain: CDC24 homology <CD24>
F;509-557/Domain: protein kinase C zinc-binding repeat homology <KZ2>
F;522-542/Region: zinc finger CCCC motif
F;547-560/Region: zinc finger HCCH motif
F;547-560/Region: zinc finger HCCH motif
F;598-648/Domain: Sin homology <SH3A>
F;598-648/Domain: Sin homology <SH3A>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
A; Residues: 1-878 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;664-756/Domain: SH2 homology <SH2>
F;783-831/Domain: SH3 homology <SH3B>
F;433/Binding site: phosphate (Ser) (covalent) (by protein kinase A) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Map position: 19p13.3-19p13.3
C; Superfamily: vav transforming protein; CDC24 homology; protein kinase
C; Keywords: phosphoprotein; transforming protein; zinc finger
                                                                                                                                                                                                                                         F;823-872/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GDB:370880; OMIM:600428
                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: GDB:VAV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:S76992; NID:g913345; PIDN:AAB34377.1; PID:g913346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: I51940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       occurred in the published human sequences with the mouse C_{\ell}Comment: In comparing these sequences with the mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Note: in the sequence from mouse the authors find three additional nucleotides that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A,Title: The hematopoietically expressed vav proto-oncogene shares homology with the A,Reference number: S23669; MUID:92228488; PMID:1565462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: I51940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I51940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GDB:127112; OMIM:164875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Gene: GDB: VAV1; VAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Contents: annotation
                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                local Similarity
812 VFTPRVIGTAVARYNFAARDMRELSLREGDVVRIYSRIGGDQG---WWKG-----ETN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               830 YVEED -- YSE 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR------VGWFPAN
                                                       20 VYT---ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEM 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86 LVREQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                        21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                      SH2 homology <SH2>
SH3 homology <SH3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15.5%; Score 91.5; DB 32.9%; Pred. No. 0.13; tive 14; Mismatches
                                                                                                                                                14.3%; Score 84.5;
27.6%; Pred. No. 0.
                                                                                                                    20;
                                                                                                                                                Pred. No. 0.77;
                                                                                                                    Mismatches
                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                    22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 839;
                                                                                                                                                                            Length 878;
                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (see PIR:TVMSVV), there
                                                                                                                 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            വ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         zinc-binding
861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J.L.; Kw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ge
```

```
C;Species: Sulfolobus sp.
C;Date: 02-Sep-2000 #sequence_revision 02-Sep-2000 #text_change 30-Sep-2002 C;Accession: T31051
      R;She, Q.; Phan, H.; Garrett, R.A.; Albers, S.V.; Stedman, K.M.; Zillig, W. Extremophiles 2, 417-425, 1998
A;Title: Genetic profile of pNOB8 from Sulfolobus: the first conjugative pl
                                                                                                                                                                                                transposase homolog - Sulfolobus sp. pl. N;Alternate names: hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Description: positive control of level of cellular cAMP at the stage at which the cell C;Superfamily: budding yeast CDC25; CDC25-type guanine nucleotide exchange activator hom C;Keywords: cell cycle control; transmembrane protein F;65-123/Domain: SH3 homology <SH3> F;1301-1542/Domain: CDC25-type guanine nucleotide exchange activator homology <SOS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Map position: 12R
C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Pauley, A. submitted to the EMBL Data Library, November 1994 .- nocorintion: The sequence of S. cerevisiae cosmid L2142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 877-1589 < DAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Reference number: S43051; MUID:88194639; PMID:3329037 A;Accession: S43051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cell 48, 789-799, 1987
A;Title: The S. cerevisiae CDC25 gene product regulates the RAS/adenylate cyclase pathw: A;Reference number: A26596; MUID:87131091; PMID:3545497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Saccharomyces cerevisiae C;Date: 31-Mar-1988 #sequence revision 31-Mar-1993 #text_change 21-Jul-2000 C;Accession: A26596; S51442; A23444; S43051; S47990 R;Broek, D.; Toda, T.; Michaeli, T.; Levin, L.; Birchmeier, C.; Zoller, M.; Powers, Cell 48, 789-799, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: SGD:S0004301; MIPS:YLR310c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Gene: SGD: CDC25; CTN1; MIPS: YLR310c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references: EMBL:X03579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Camonis, J.H.; Kalekine, M.; Gondre, B.; Garreau, H.; Boy-Marcotte, E.; Jacquet, EMBO J. 5, 375-380, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Daniel, J.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:X03579; NID:g3483; PIDN:CAA27259.1; PID:g3484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: DNA
A;Residues: 1-496,'Y',498-953,'LSVIMNLSR',964-1589 <CAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Characterization, cloning and sequence analysis of the CDC25 gene which contro. A;Reference number: A23444; MUID:86220116; PMID:3011405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Residues: 11589 <PAU>
A;Cross_references: EMBL:U17247; NID:g577216; PIDN:AAB67360.1; PID:g577222; GSPDB:GN0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell division control protein CDC25 - yeast (Saccharomyces cerevisiae) N,Alternate names: protein L2142.6; protein YLR310c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: A23444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Accession: S51442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Reference number: S51437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: EMBL:M15458; NID:g171184; PIDN:AAA34478.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: DNA
A;Residues: 1-1589 <BRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                urr. Genet. 10, 879-885, 1986
Title: The CDC25 "Start" gene of Saccharomyces cerevisiae: sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                 100 WWDGLVIDDSNGKVN-RGWFPQNFGRPLR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63 FWAGSVYGDHQDEMGIVGYFPSNLVREQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45 LSSSPSTSELTSIRPIGIVVAAYDENYPIKKDSSSQLLSVQQGETIYILNK----NSSG- 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 LSSKKLCADEECVYTISLARAQEDYNAP-----DCRFINVKKGQQIYVYSKLVTENGAGA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 82.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
Sulfolobus: the first conjugative plasmid
                                                                                                                                                                                                          413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             active
      from
```

A; Molecule type: mRNA A; Residues: 1-695 < YA

A; Accession: S66662

Eur. J. Blochem. 232, 411-419, 1995 A;Title: Tissue-type transglutaminase from red sea bream (Pagrus major). Sequence anal. A;Reference number: S66662; MUID:96035874; PMID:7556189

R; Yasueda, H.; Nakanishi, K.; Kumazawa, Y.; Nagase, K.; Motoki, M.; Matsui,

C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 18-Jun-1999 C;Accession: S66662

protein-glutamine gamma-glutamyltransferase (EC 2.3.2.13) - red sea bream N;Alternate names: transglutaminase C;Species: Chrysophrys major (red sea bream)

S66662

```
밁
                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                          A;Introns: 1/3; 41/3; 72/2; 103/2; 162/3; 184/1; 217/1; 296/1; 340/3; 390/3; 447/3; 50 C;Superfamily: protozoan myosin heavy chain IB; myosin motor domain homology; SH3 homo F;14-674/Domain: myosin motor domain homology <MMO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues: 1-1215 <LEE>
A;Cross-references: EMBL:AF085185; NID:g3599477; PID:g3599478; PIDN:AAC35357.1
A;Experimental source: strain Neff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Lee, W.L.; Ostap, E.M.; Zot, H.G.; Pollard, T.D. submitted to the EMBL Data Library, August 1998 A;Description: Hydrodynamic and ligand binding properties A;Reference number: Z21216 A;Accession: T32734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               myosin-IA - Acanthamoeba castellanii
C;Species: Acanthamoeba castellanii
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 08-Sep-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Genome: plasmid NOBB
C;Superfamily: Mycobacterium tuberculosis probable IS1081 transposase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-413 <SHE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Experimental source: strain NOB8H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:AJ010405; NID:e1351926; PID:e1351973; PIDN:CAA09157.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: T31051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: Z20959; MUID: 99044580; PMID: 9827331
                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetics:
                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                  1158 VPTVGRCRALYDYGAQEADELTLREGDVIDVIQK-----SGEWWEGTLNGK------ 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         350 LARFEEELG--GYFPS--LRSLEVY 370
                                                 80 GYFPSNLVRE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               296 KAISSLSQLVQPFSPARAKRLLDAADKYCAFLNFPREVRHYLY----TNNTSESF--NST 349
                                                                                                                                                 20 VYTISLARAQEDYNAPDCRFINVKKGQQIYYYSKLVTENGAGAFWAGSVYGDHQDEMGIV 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11 KKLCADEECVYTISLARAQEDYNAPD--CRFINVKKGQQIYVYSKLVTENGAGAFWAGSV 68
                                                                                                                                                                                                                                     Similarity
GVFPANYVED 1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YGDHQDEMGIVGYFPSNLVREQRVY 93
                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                     12.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13.0%; Score 77;
31.8%; Pred. No.
                                                                                                                                                                                                             12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15; Mismatches
                                                                                                                                                                                                                                   Score 75.5;
Pred. No. 10
                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; Length 413;
                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                          25;
                                                                                                                                                                                                                                                           Length 1215;
                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of Acanthamoeba myosin-IA
                                                                                                                                                                                                          13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

```
mixed-lineage protein kinase (EC 2.7.1.-) 3 - human
N;Alternate names: protein kinase PTK1; protein kinase SPRK
C;Species: Homo sapiens (man)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: A53800; I58395
R;Gallo, K.A.; Mark, M.R.; Scadden, D.T.; Wang, Z.; Gu, Q.; Godowski, P.J.
J. Biol. Chem. 269, 15092-15100, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                   몽
                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 29-Oct-1999
C;Accession: T21356; T21540
R;Wilkinson, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Map position: 1
A;Introns: 129/2; 177/1; 206/2; 349/3; 436/3; 506/2; 626/3; 689/3; 772/3; 845/3; 903/3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: EMBL;Z83224; PIDN:CAB05720.1; GSPDB:GN00019; CESP:F25H2.13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-994 <WI2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-994 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:S79761; NID:g1176434; PIDN:AAB35370.1; PID:g1176435 C;Superfamily: protein-glutamine gamma-glutamyltransferase C;Keywords: aminoacyltransferase F;272/Active site: Cys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Experimental source: clone F29C6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Reference number: Z19437
A; Accession: T21540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               submitted to the EMBL Data Library, December 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Wilkinson, J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Experimental source: clone F25H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:Z79754; PIDN:CAB02102.1; GSPDB:GN00019; CESP:F25H2.13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: T21356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Reference number:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        submitted to the EMBL Data Library, September 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein F25H2.13 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CESP: F25H2.13
                                                                                                                                                                                                                                                                                                                                                                                                                                         397 EEVALTEKGDGMEKVADFLLSIYSTHAQDVAAAVGEETVKLVDRVDPKTVARNCKLYIQK 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          339 MDKLFGSSQLKSVPPLSGKASDGE-ILLETLAKAGFDANSVE-RLVDVLRDAISYLLSKN 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             448 KEREVYKKAGRRVTEPSNEI 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      393 EVNADTIYWIYOKDGOR-----RKITEDHASYGKNISTKSVYGNHREDVTLHYKYPEGSO 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54 ---LVTENGAG----AFWAGSVYGDH-QDEMGIVG-----YFPSNLVREQRVYQEA 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88 REQRVYQEATKEI -- PTTDI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 MDKL-SSKKL-----CADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 12.5%; Score 74; DB 2; Length 695.
Similarity 26.2%; Pred. No. 7.9;
21; Conservative 21; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                   DKDNEKLTIKYFC 469
                                                                                                                                                                                                                                                                                                                                                                                      TKEIPTTDIDEFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Z19411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12.5%; Score 74; DB 2; Length 994; 27.8%; Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                             밁
```

```
Ş
                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     probable signal transduction protein - fission yeast (Schizosaccharomyces pombe) N;Alternate names: FCH domain and SH3 domain containing protein C;Species: Schizosaccharomyces pombe C;Date: 19-Jul-1996 #sequence revision 13-Mar-1997 #text_change 21-Jul-2000 C;Accession: T39317; S67383
                                                                                                                                                                                                                                                                                       F;614-665/Domain: SH3 homology <SH3>
                                                                                                                                                                                                                                                                                                                                              A; Map position: 2
A; Introns: 23/3; 54/2; 612/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Wood, V.; Rajandream, M.A.; Barrell, B.G.; Beck, A.; Reinhardt, R. submitted to the EMBL Data Library, September 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:U07747; NID:g464027; PIDN:AAA19647.1; PID:g464028 R;Ing, Y.L.; Leung, I.W.; Heng, H.H.; Tsui, L.C.; Lassam, N.J. Oncogene 9, 1745-1750, 1994
A;Title: MIK-3: identification of a widely-expressed protein kinase bearing A;Reference number: I58395; MUID:94239754; PMID:8183572
                                                                                                                                                                                                                                                                                                                            C; Superfamily: SH3
                                                                                                                                                                                                                                                                                                                                                                                                              A;Gene: SPBC11C11.02
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:AL031526; PIDN:CAA20684.1; GSPDB:GN00067; SPDB:SPBC11C11.02
A;Experimental source: strain 972h-; cosmid c11C11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Residues: 1-670 <WOO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Accession: T39317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: Z21844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S67383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;115-383/Domain: protein kinase homology <KIN>
F;123-131/Region: protein kinase ATP-binding motif
F;403-424/Region: leucine zipper motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Map position: 11q13.1-11q13.3
C;Superfamily: mixed-lineage protein kinase 3; protein kinase homology; SH3 homology
C;Keywords: ATP; leucine zipper; phosphotransferase; serine/threonine-specific prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-847 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-847 < GAL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A; Accession: A53800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;48-100/Domain: SH3 homology <SH32>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GDB:134755; OMIM:600050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Gene: GDB: MLK3; PTK1; SPRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:L32976; NID:g488295; PIDN:AAA59859.1; PID:g488296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: 158395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Title: Identification and characterization of SPRK, a novel src-homology 3 domain-co
A; Reference number: A53800; MUID:94253068; PMID:8195146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                Matches
                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               468-482/Region: basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          438-459/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                             617 DYDAAIPEEISFRKGDTIAVLK--LYEDG---WWEGFVVGEDDHNR-----GQFPSNFVR 666
89 EQRV 92
                                                                                                          31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYG--DHQDEMGIVGYFPSNLVR 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DYEPSGQDELALRKGDRVEVLSRDAAISGDEGWWAGQVGGQ-----VGIFPSNYV 100
                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             leucine zipper motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12.4%;
                                                                                                                                                                                               12.4%;
39.1%;
                                                                                                                                                                       6; Mismatches
                                                                                                                                                                                               Score 73; DB 2; Length 670
Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 73.5; DB 1; Length 847; Pred. No. 11; B; Mismatches 23; Indels
                                                                                                                                                                       21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         serine/threonine-specific protein
                                                                                                                                                                       12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7;
                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       an
```

667 EIEV 670

```
C;Species: Homo sapiens (man)
C;Date: 28-Oct-1996 #sequence revision 13-Mar-1997 #text_change 11-Jun-1999
C;Accession: S68178; I38044; $\overline{S}32468
                                                                                                                                               RESULT 14
S68178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Nolling, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.S.; Zeng, Q.; Gibson, R.; Lee ; Daly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R.
J. Bacteriol. 183, 4823-4838, Zeng
A;Title: Genome Sequence and Comparative Analysis of the Solvent-Producing Bacterium Cl. A;Reference number: A96900; MUID:21359325; PMID:21359325
                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                               mixed-lineage protein kinase 2 (EC 2.7.1.-) - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-585 <KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATP-dependent RNA helicase, superfamily II [imported] - Clostridium acetobutylicum C;Spec.es: Clostridium acetobutylicum C;Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 14-Sep-2001 C;Accession: G96995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C.Species: Neisseria meningitidis
C;Date: 05-May-2000 #sequence_revision 05-May-2000 #text_change 02-Feb-2001
C;Date: 05-May-2000 #sequence_revision 05-May-2000 #text_change 02-Feb-2001
C;Accession: CB1920
R;Parkhill, J.; Achtman, M.; James, K.D.; Bentley, S.D.; Churcher, C.; Klee, S.R.; Morel; Holroyd, S.; Jagels, K.; Leather, S.; Moule, S.; Mungall, K.; Quail, M.A.; Rajandream, Nature 404, 502-506, 2000
Nature 404, 502-506, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Gene: CAC0778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:AE001437; PIDN:AAK78754.1; PID:g15023664; GSPDB:GN00168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:AL162754; GB:AL157959; NID:g7379424; PIDN:CAB84045.1; PID:g737948
A;Experimental source: serogroup A, strain Z2491
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Title: Complete DNA sequence of a serogroup A strain of Neisseria menigitidis Z2491. A;Reference number: A81775; MUID:20222556; PMID:10761919 A;Accession: C81920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-344 < PAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical protein NMA0762 [imported] - Neisseria meningitidis (strain Z2491 serogroup C;Species: Neisseria meningitidis C;Datc: 05-May-2000 #sequence_revision 05-May-2000 #text_change 02-Feb-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Gene: NMA0762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Experimental source: Clostridium acetobutylicum ATCC824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                 327 IKASIIYGDLPPEVRKLQY-----EQFIKKE-TKVLVTTD 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238 WSDNSAFDLNGDGFGDSAYRPNGII 262
                                                                                                                                                                                                                                                                                                                          63 FWAGSVYGDHODEMGIVGYFPSNLVREORVYQEATKEIPTTD 104
                                                                                                                                                                                                                                                                                                                                                                                                                                         12 KLCADE----ECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSK-----LVTENGAGA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 DKLSANHF---ENCQIGIHFTAAIEGTSLHDNSFIN-NESOVKYVSTRFLDWSEGGHGNY 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64 WA-GSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 DKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLV--TENGAGAF 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 29.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                   KDCEDEYEIKEYKRAIPLEVEDESFNYKD-----IKEGDAVVVFSKKRVLEIAQSYSARG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12.0%; Score 71; DB 2; Length 585; 29.4%; Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12.1%; Score 71.5; D
29.4%; Pred. No. 6.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
```

```
A; Molecule type: DNA
A; Residues: 1-308 <BEV>
                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: Z24490
A; Accession: T48525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Bevan, M.; Hilbert, H.; Braun, M.; Holzer, E.; Brandt, A.; Duesterhoeft, A.; submitted to the Protein Sequence Database, April 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Keywords: ATP; leucine zipper; phosphotransferase; serine/threonine-specific profein F;23-76/Domain: SH3 homology <SH3 > F;96-364/Domain: protein kinase homology <KIN>F;104-112/Region: protein kinase ATP-binding motif F;384-405/Region: leucine zipper motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Aesidues: 1-461,'A', V',465-470,'S',472-806,'R',808-817,'A',819-954 <RES>
A;Cross-references: EMBL:Z48615; NID:g758592; PIDN:CAA88531.1; PID:g758593
R;Dorow, D.S.; Devereux, L.; Dietzsch, E.; de Kretser, T.
Eur. J. Biochem. 213, 701-710, 1993
Bur. J. Biochem. 213, 701-710, 1993
A;Title: Identification of a new family of human epithelial protein kinases
A;Reference number: S32467; MUID:93238756; PMID:8477742
                                                                                                                                                                                              A; Map position: 5
                                                                                                                                                                                                                                                     A; Experimental source: cultivar Columbia; BAC clone T22P22
                                                                                                                                                                                                                                                                                     A; Cross-references: EMBL: AL163814
                                                                                                                                                                                                                                                                                                                                                                                A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Accession: T48525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein T22P22.50 - Arabidopsis thaliana C:Species: Arabidopsis thaliana (mouse-ear cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;419-440/Region: leucine zipper motif
F;449-463/Region: basic
F;125,145,222,224/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GDB:362654; GDB:624810; OMIM:600137
A;Map position: 19q13.1-19q13.2
C;Superfamily: mixed-lineage protein kinase 2; protein kinase homology; SH3 homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:X90846; NID:g971419; PIDN:CAA62351.1; PID:g971420 R;Katoh, M.; Hirai, M.; Sugimura, T.; Terada, M. Oncogene 10, 1447-1451, 1995 A;Title: Cloning and characterization of MST, a novel (putative) serine/threonine kina: A;Reference number: 138044; MUID:95249256; PMID:7731697 A;Accession: 138044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Dorow, D.S.; Devereux, L.; Tu, G.F.; Price, G.; Nicholl, J.K.; Sutherland, G.R.; Simj Eur. J. Biochem. 234, 492-500, 1995
A;Title: Complete nucleotide sequence, expression, and chromosomal localisation of hum. A;Reference number: S68178; MUID:96128179; PMID:8536694
A;Accession: S68178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T48525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: GDB:MLK2; GDB:MST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 244-464, 'AQAAGRRQPHQPALWL' <DO2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: S32468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-954 < DOR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: translated from GB/EMBL/DDBJ
            Matches
                             Query Match 11.8%; Score 70; DB 2; Length 308; Best Local Similarity 37.2%; Pred. No. 8.4;
                                                                                                                                                                    Introns:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 20-Apr-2000
                                                                                                                                                                                                                                  Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genetics
                                                                                                                                 ns: 63/3; 1
T22P22.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26 DYBAAGDEBUTLRRGDRVQVUSQDCAVSGDEGWWTG-----QLPSGRVGVFPSNYV 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
         Conservative
                                                                                                                                                              117/3; 135/3; 180/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 71; DB 1; Length 954; Pred. No. 24;
   Mismatches
19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein kinases
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           containing
۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۳.
```

44 KGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNL 86

Db 168 KGQERAVYASIVQEKDIGNWWVTDVRYDRPDVH--IGYWPKEL 208

Search completed: December 29, 2003, 16:10:41 Job time : 11.4006 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                        461.5
395
                                                                                                                                                                     BLOSUM62
                                                                                                                                                                                                                                                                                                                                       Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127863 segs, 47026705 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        December 29, 2003, 16:03:18 ; Search time 4.31373 Seconds (without alignments)
1199.181 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-49
    SwissProt_41:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                            AROA_STRP8
AROA_STRPY
PIXB_HUMAN
VINE_MOUSE
SRK1_SPOLA
SRK4_SPOLA
                                                                                                                                                VAV MOUSE
VAV HOMAN
VAV HOMAN
VAV3 HUMAN
VAV2 HUMAN
VAV2 HUMAN
CC25 YEAST
SHK1 HUMAN
SHK1 RAT
                                                                                                                    TGM2 PAGMA
YBY2 SCHPO
SHK3 RAT
                                                            ARH6 HUMAN
ZO3 HUMAN
ZO3 HUMAN
M3KA HUMAN
ITN1 RAT
NCK2 HUMAN
IF2M HUMAN
                                                                                                                                                                                                                                         OTOR MOUSE
OTOR THMAN
OTOR RANCA
MIA HUMAN
MIA HOVIN
MIA BOVIN
MIA RAT
MIA MOUSE
VAV RAT
                                                                                                                                                                                                                                                                                                                                       Ü
                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127863
                                                                  P52181 pagrus majo
Q1019 schizosacch
Q9j1u4 rattus norv
Q15052 homo sapien
Q95049 homo sapien
Q02779 homo sapien
Q9wve9 rattus norv
Q43639 homo sapien
                                                                                                                  P52735 homo sapien
P04821 saccharomyc
Q9y566 homo sapien
Q9wv48 rattus norv
P52181 pagrus majo
Q10199 schizosacch
Q9j1u4 rattus norv
                              P46199
Q8p0h1
Q99z83
Q14155
                                                                                                                                                                              Q9ukw4
Q60992
P52735
                                                                                                                                                                                                                   P27870
Q9r0c8
                                                                                                                                                                                                                                       Q28038
Q62946
Q61865
P54100
                                                                                                                                                                                                           P15498
                                                                                                                                                                                                                                                                                                                                      Description
) homo sapien
) homo sapien
1 streptococc
3 streptococc
5 homo sapien
6 mus musculu
6 spongilla 1
0 spongilla 1
                                                                                                                                                                                                                                                                                     9 homo sapien
6 gallus gall
5 rana catesb
                                                                                                                                                                                                                  mus musculu
                                                                                                                                                                                      mus musculu
                                                                                                                                                                                               homo sapien
                                                                                                                                                                                                                                        rattus norv
                                                                                                                                                                                                                                                                  homo sapien
bos taurus
                                                                                                                                                                                                                                                                                                                  mus musculu
                                                                                                                                                                                                                                                mus musculu
                                                                                                                                                                                                                                                           rattus norv
```

ALIGNMENTS

7 7 7 X C C C C C C C C C C C C C C C C	88888888	88888888888888888888888888888888888888	RR RR R RR RR RR RR RR RR RR RR RR RR R	RESULT OTOR M AC AC AT DT TI TI TI TI TI TI TI TI TI TI TI TI TI
IMP.	his SWISS-PROT entry is copyright. It is produced through a etween the Swiss Institute of Bioinformatics and the EMB be European Bioinformatics Institute. There are no restrise by non-profit institutions as long as its content is odified and this statement is not removed. Usage by and ntities requires a license agreement (See http://www.isb-sirsend.an email to license@isb-sib.ch).	NUENCE FROM N.A. SUNE=Fetal; SUNE=Fetal; LINE=21100875; PubMed=11161796; Idtorff N.D., Frodin M., Attle-Bitach T., Vekemans M., Tommerup N.; Idtorff N.D., Frodin M., Attle-Bitach T., Vekemans M., Tommerup N.; Identification and characterization of an inner ear-expressed human Identification and characterization of an inner ear-expressed human Identification and characterization of an inner ear-expressed human Identification and characterization."; Improve that abolishes translation."; Improve that abolishes translation."; Improve that abolishes translation."; Improve that abolishes translation."; Install LARITY: Goldains 1 Secreted (Potential). Insularity: Contains 1 SH3 domain. Insularity: Contains 1 SH3 domain.	[1] SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDLINE=20334619; PubMed=10873378; MEDLINE=20334619; PubMed=10873378; MEDLINE=20334619; PubMed=10873378; Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; "A novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping."; Genomics 66:242-248(2000).	MOUSE STANDARD; PRT; 128 AA. OTOR MOUSE STANDARD; PRT; 128 AA. Q9JIE3; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 41, Last sequence update) 28-FBB-2003 (Rel. 41, Last annotation update) Otoraplin precursor (Melanoma inhibitory activity-like protein). OTOR OR MIAL. Mus musculus (Mouse). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. NCBI TaxID-10090;

```
RESULT
OTOR_HO
                REPRESENTATION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOST
MEDLINE=21638749; PubMed=11780052;

A Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,

Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,

Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,

Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,

Buck D., Burrill W.D., Buller A.P., Carder C., Carter N.P.,

Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,

Chegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,

Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,

Clard D.V., Griffiths G.J., Franch L., Garner P.,

A Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,

Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,

A Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=21100875; PubMed=11161796; Rendtorff N.D., Frodin M., Attie-Bitach T., Vekemans M., Tommerup N., "Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent polymorphism that abolishes translation."; Genomics 71:40-52(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29NRC9;
16-OCT-2001 (Rel. 40, Createu,
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
(Melanoma inhibitory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=20568254; PubMed=10998416; Cohen-Salmon M., Frenz D., Liu W., Verpy E., Voegeling S., Petit "Fdp, a new fibrocyte-derived protein related to MIA/CD-RAP, has in vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth, J.Morton C.C.; Denis C.S., Bevel A.M., Hudspeth, J.D., Morton C.C.; The conserved cochlear gene, OTCR: identification, expression analysis, and chromosomal mapping.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTOR_HUMAN
Q9NRC9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Brain, and Cochlea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mesenchyme.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=20334619; PubMed=10873378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ISSUE=Cochlea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66:242-248(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chem. 275:40036-40041(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55 W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37 E
127 E
14328 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 574; DB 1;
Pred. No. 6.4e-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Å8
A8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3DD47D4C77C4A7FD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

RESULT 3
OTOR_CHIC
ID OTOR

CHICK

OTOR_CHICK Q918P6; 16-OCT-2001

STANDARD;

132

B

16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last seg 28-FEB-2003 (Rel. 41, Last ann

Last sequence update)
Last annotation updat

Otoraplin OTOR.

precursor

```
Ş
                                                                  밁
                                                                                              Ş
                                                                                                                                                                                                   Best
                                                                                                                                   Matches
                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF233261; AAF82078.1; -.
EMBL; AF233505; AAG42356.1; -.
EMBL; AJ242552; CAC27443.1; -.
EMBL; AJ252324; CAC28085.1; -.
EMBL; AJ252325; CAC28085.1; JOINED.
EMBL; AJ252326; CAC28085.1; JOINED.
EMBL; AJ252326; CAC28085.1; JOINED.
EMBL; AJ252327; CAC28085.1; JOINED.
EMBL; AJ252327; CAC28085.1; JOINED.
EMBL; AL034283; CAC16848.1; -.
HSSP; Q16674; 1111.
                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A., Milliams A.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I., Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H., Price C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S., Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E., Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A., Tracey A., Tromans A.C., Vaudin M., Wall M., Walliams J.M., Thorpe A., Whittehead S.L., Whittaker P., Willey D.L., Williams J.M., Whittaker P., Willey D.L., Williams S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                  Signal; SH3 domain.
SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                MIM; 606067; -:
GO; GO:0007605; P:hearing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -i- TISSUE SPECIFICITY: HIGHLY EXPRESSED I-i- SIMILARITY: BELONGS TO THE MIA / OTOF -i- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nature 414:865-871(2001).
-!- SUBCELLULAR LOCATION: Secreted (Potential)
                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                     SMART;
                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00018; SH3; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R.,
                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                      Genew; HGNC:8517; OTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "The DNA sequence and comparative analysis of human chromosome 20.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lehvaeslaiho M.H.,
                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                               Local
 79
                                                                  19
                                61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE
                                                                                                                                  98;
                                                                                                                                                                                                                                                                                                                                   SM00326; SH3;
                                                                                                 1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                   Similarity
                                                                 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                 PS50002; SH3; FALSE NEG
                                                                                                                                                                                                                                                                                                                                                                      IPR001
                                                                                                                                                                                                   128
                                                                                                                                  Conservative
                                                                                                                                                                                                                    S
5
                                                                                                                                                                                                                                   19
39
32
                                                                                                                                                                                                   Å,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Leversha M.A.,
                                                                                                                                                                                                                                                 18
128
110
                                                                                                                                                                                                   14332
                                                                                                                                               91.5%;
                                                                                                                                                                                                                                                                                                                                                                    SH3
                                                                                                                                                                                               E
                                                                                                                                                                                                               POTENTIAL.
OTORAPLIN.
SH3.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                             Score 541;
                                                                                                                                                 Pred. No.
                                                                                                                                                                                                   9BB52C7F5D4FB700
                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lloyd C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / OTOR FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    noved. Usage by and for commercial
(See http://www.isb-sib.ch/announce/
                                                                                                                                                                  DB 1;
                                                                                                                                                 .7e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IN COCHLEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lloyd D.M.
                                                                                                                                                               Length 128;
                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and for co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lovell J.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williams S.A.,
                                                                                                                                  0
                                                                                                                                Gaps
                                                                    78
```

```
RESULT 4
OTOR_RANCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOLUTION SERVING COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SOLUTION OF THE AMERICAN COUNTY AND SO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                 Q918P5;
16-OCT-2001
16-OCT-2001
28-FEB-2003
                 Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.; Paramovel conserved cochlear gene, OTOR: identification, express analysis, and chromosomal mapping.";
                                                                                                                                                                                                                                             Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Signal;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Robertson N.G., Heller S., Lin J.S., Resendes B.L., Weremowicz S., Denis C.S., Bell A.M., Hudspeth A.J., Morton C.C.;
"A novel conserved cochlear gene, OTOR: identification, expression analysis, and chromosomal mapping.";
G:nomics 66:242-248(2000).
-!- SUBCELLULAR LOCATION: Secreted (Potential).
-!- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN COCHLEA.
Genomics 66:242-248(2000)
                                                                                                                                     MEDLINE=20334619; PubMed=10873378;
                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                     NCBI_TaxID=8400;
                                                                                                                                                                                                                                                                                                                                                                Otoraplin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -i- TISSUE SPECIFICITY: HIGHLY EXPRESS
-i- SIMILARITY: BELONGS TO THE MIA / O
-i- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=20334619; PubMed=10873378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RANCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q16674;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF233518; AAF82727.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 AFWAGSVYG-DHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SM00326; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EFWAGSVYGEEYEDHMGTVGYFPRSLVSEQHVYQEANKTIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GIFMDKLASKKLCADDDCVYTISLVRABEDYNAPDCRFINIKKGQLIYVYSKLVKEKESG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PS50002; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           132 AA;
                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 40, Created)
(Rel. 40, Last sequence update)
(Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
132
114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTORAPLIN. SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 461.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9D1CB07FD353CE1C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .4e-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>, ,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
```

```
RESULT 5
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                             MIA_HUMA
Q16674;
                                                   "Structure and promoter analysis of the gene encoding the human melanoma-inhibiting protein MIA."; 7. Biol. Chem. 271:490-495(1996).
                                                                                                                                                                               Blesch A., Bosserhoff A.-K., Apfel R., Behl C., Hessdoerfer B., Schmitt A., Jachimczak P., Lottspeich F., Buettner R., Bogdahn U., "Cloning of a novel malignant melanoma-derived growth-regulatory protein, MIA.";
                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                         SEQUENCE FROM N.A.
                                                                                              Bosserhoff A.-K., Hein R.,
                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                        MEDLINE=96132947; PubMed=8550608;
                                                                                                                                                                  Cancer Res. 54:5695-5701(1994).
                                                                                                                                                                                                                                          MEDLINE=95007612;
                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                   Melanoma derived growth regulatory protein precursor (Melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -i- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY. -i- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                       inhibitory activity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signal; SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF233519; AAF82728.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - 1 - SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nterPro;
                                                                                                                          SSUE=Placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                              NAMOH
                                                                                                                                                                                                                                                                                     TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q16674;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 AGAFWAGSVYGD-HQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTEN-G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGEFWSGSVYSDQYRDQQGLVGYFPSSLVTELTVYKDELQELPTTAVDFYCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YGVYMQKLSDKKLCADDECIYAISFGRAEDDYNAPDCRFVNLKKGELVYIYTKLVKENDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS50002; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 4 W Z
4 00 U 00
                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                    PubMed=7923218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
133
115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tatement is not removed. Usage by and for commercial license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66.8%; Score 395; DB 1; 59.8%; Pred. No. 2:9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₩,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Secreted
                                                                                              Bogdahn U., Buettner R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
OTORAPLIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25440C1A3CF911AE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                            131 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
```

MEDLINE=22388257; PubMed=12477932;

TISSUE=Skin;

```
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninco P., Prange C.,
RA Roberts S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Robask S.A., McDevan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Scheuntz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J.M., Marra M.A.;
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT human and mouse cDNA sequences."
RT Decomposition of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the prope
STRAND
TURN
STRAND
STRAND
                                                                                               TURN
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=21244635; PubMed=11331761;
Lougheed J.C., Holton J.M., Alber T., Bazan J.F., Handel T.M.;
"Structure of melanoma inhibitory activity protein, a member of a
recently identified family of secreted proteins.";
Proc. Natl. Acad. Sci. U.S.A. 98:5515-5520(2001).
-!- FUNCTION: ELICITS GROWTH INHIBITION ON MELANOMA CELLS IN VITRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                 STRAND
                                                                                                                                                                     DISULFID
                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genew; HGNC:7076; MIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (1.39 ANGSTROMS) OF 25-131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                     GO:0005615; C:extracellular space; TAS GO:0008283; P:cell proliferation; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY. SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE SPECIFICITY: ALL MALIGNANT MELANOMA CELL LINES TESTED AND INFREQUENTLY IN GLIOMA CELL LINES.
PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AS WELL AS SOME OTHER NEUROECTODERMAL TUMORS, INCLUDING GLIOMAS SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1K0X; 24-JUL-02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1IIJ; 16-MAY-01.
1HJD; 29-JAN-02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I38019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X75450; CAA53203.1; -. X84707; CAA59195.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BC005910; AAH05910.1;
                                                                                                                                                                                                                                                                                                                                        PS50002; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I38019.
     Signal;
                                                                                                                                                                                                                                                                                                                    SH3
                                                                                                                                                                                                                                                                                                                 domain; 3D-structure.
                                                                                                                                                                                                                                              PROTEIN.
                                                                                                                                                                                                                                                                    MELANOMA DERIVED GROWTH REGULATORY
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BOVIN
InterPro; IPKUV...
InterPro; IPKUV...
Pfam; PF00018; SH3; 1.
SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MIA_BOVIN
Q28038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HELIX
SEQUENCE
                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HELIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAND
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TURN
STRAND
HELIX
                                                     EMBL; U51437; AAC48523.1; -. HSSP; Q16674; IIIJ.
                                                                                        entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                     -1- TISSUE SPECIFICITY: CARTILAGE PRIMORDIA AND CARTILAGE.
-1- INDUCTION: Repressed by retinoic acid.
-1- PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
                                                                                                                                                                                                                                                          MAINTENANCE.
-!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                       Dietz U.H., Sandell L.J.; "Cloning of a retinoic acid-sensitive mRNA expressed in cartilage and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Melanoma derived growth regulatory protein precursor (Melanoma inhibitory activity) (Cartilage-derived retinoic acid-sensitive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TURN
                                                                                                                                                                                            -!- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY. -!- SIMILARITY: Contains 1 SH3 domain.
                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria;
Bovidae; Bovinae; B
                                                                                                                                                                                                                                                                                                                                                                                                                                            Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                      MIA OR CDRAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAND
                                                                                                                                                                                                                                                                                                          during chondrogenesis.",
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAND
                                                                                                                                                                                                                                                                                                                                                    MEDLINE=96216414; PubMed=8621736;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                  Biol.
                                                                                                                                                                                                                                                                              SIOI. Chem. 271:3311-3316(1250)
FUNCTION: MAY FUNCTION DURING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84 WGGSVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64 WAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27 MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                     Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CD-RAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           104
1122
122
                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14509 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 264.5; DB 1;
Pred. No. 1.1e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4D3BB30BD600BBDC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                   CARTILAGE DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                w
••
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SET TET EX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 52
            EMBL; U51438; AAC52481.1; -. EMBL; U67884; AAB40659.1; -. HSSP; Q16674; IIIJ.
                                                                              the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       062946; P97591; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update) Melanoma derived growth regulatory protein precursor (Melanoma inhibitory activity) (Cartilage-derived retinoic acid-sensitive
                                                                                                                                                                                                                                                                                                                                       Dietz U.H., Sandell L.J., "Cloning of a retinoic acid-sensitive mRNA expressed in cartilage and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
DISULFID
SEQUENCE
                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                          -!- SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY.
                                                                                                                                                                                                                                                                                                                           during chondrogenesis."
                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 34-124 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                 J. Biol.
                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=96216414; PubMed=8621736;
                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Cartilage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  mammary carcinogenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=Sprague-Dawley; TISSUE=Mammary gland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Gene expression changes associated with chemically-induced mammary carcinogenesis.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MIA OR CDRAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MIA RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Growth
                                                                                                                                                                                                                   TISSUE SPECIFICITY: CARTILAGE PRIMORDIA AND CARTILAGE INDUCTION: Repressed by retinoic acid.
PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
                                                                                                                                                                                                                                                                                            PUNCTION: MAY FUNCTION DURING CARTILAGE DEVELOPMENT AND
                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                    MAINTENANCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80 RLFWGGSVQGDYYGDGAARLGYFPSSIVREDQTLKPAKTDVKTDIWDFYCQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62 -AFWAGSVYGDHQ-DEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23 GRPMPKLADRKMCADEECSHPISVAVALQDYVAPDCRFLTIHQGQVVYIFSKL---KGRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CD-RAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĀĀ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₹
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain.
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SH3.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 263.5; DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MELANOMA DERIVED GROWTH REGULATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95D153161C78E02A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
```

```
MIA_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SPTTTTT XX DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOUSE
This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ew the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
                                                                                                                                                                                  MEDLINE-97251341; PubMed-9097023;
Bosserhoff A.K., Kondo S., Moser M., Dietz U., Copeland N.G.,
Gilbert D.J., Jenkins N.A., Buettner R., Sandell L.J.;
"Mouse CD-RAP/MIA gene: structure, chromosomal localization, and
expression in cartilage and chondrosarcoma.";
Dev. Dyn. 208:516-525(1997).
-i- FUNCTION: ELICITS GROWTH INHIBITION ON MELANOMA CELLS IN VITE
                                                                                                                                                                                                                                                                                                                                                  MEDLINE=95007612; PubMed=7923218;
Blesch A., Bosserhoff A.-K., Apfel R., Behl C., Hessdoerfer B.,
Schmitt A., Jachimczak P., Lottspeich F., Buettner R., Bogdahn U
"Cloning of a novel malignant melanoma-derived growth-regulatory
protein, MIA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1997 (Rel. 35, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Melanoma derived growth regulatory protein precursor (Melanoma inhibitory activity) (Cartilage-derived retinoic acid-sensitive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
DISULFID
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MIA OR CDRAP.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MIA MOUSE STANDARD
Q61865; 009086; P97495;
01-NOV-1997 (Rel. 35, C
16-OCT-2001 (Rel. 40, L
                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1.
PROSITE; PS50002; SH3;
                                                                                                                                                                                                                                                                                              STRAIN=129,
                                                                                                                                                                                                                                                                                                                                      Cancer Res. 54:5695-5701(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth factor; Signal; SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                              SIMILARITY).

SUBCELLULAR LOCATION: Secreted.

TISSUB SPECIFICITY: ALL MALIGNANT MELANOMA CELL LINES
INFREQUENTLY IN GLIOMA CELL LINES.

PTM: MAY POSSESS TWO INTRAMOLECULAR DISULFIDE BONDS.
                                                                        SIMILARITY: Contains 1 SH3 domain.
                                                                                       SIMILARITY: BELONGS TO THE MIA / OTOR FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26 MPKLADRKLCADBECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64 WAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WGGSVQGDYYGDLAAHLGYFPSSIVREDLTLKPGKVDMKTDEWDFYCQ
                                                                                                                                                                          SOME OTHER NEUROECTODERMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 & 2 4
2 2 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40
129
47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14536 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 263.5; DB 1;
Pred. No. 1.4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY SIMILARITY.
BY SIMILARITY.
MA -> VT (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MELANOMA DERIVED GROWTH REGULATORY PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5F99149AECF74501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130 AA
                                                                                                                                                                          TUMORS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30;
                                                                                                                                                                          INCLUDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 130;
                                                                                                                                                                                                                                                                                                                                                                             Bogdahn U.;
                                                                                                                                                                          GLIOMAS
                                                                                                                                                                                          IN VITRO AS
                             a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ن</u>
                                                                                                                                  AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 w
--
```

There are no restrictions

EMBL outstation

```
RESULT
VAV_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SO STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                     RAT
                                                       -----
                                                                                                                                                                                                                                                                                                                                                                                          VAV_RAT
P54100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
DISULFID
CONFLICT
SEQUENCE
                      binding domain.
-!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                    Song J.S., Haleem-Smith H., Arudchandran R., Gomez J., Mill J.F., Tan T.-H., Rivera J.;
"Tyrosine phosphorylation of Vav stimulates IL-6 produc "Tyrosine phosphorylation of Vav stimulates IL-6 producells by a Rac(c-Jun N-terminal kinase-dependent pathwa
                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; X94322; CAA63983.1; -.
EMBL; U85612; AAB42082.1; -.
EMBL; X97955; CAA66608.1; -.
HSSP; Q16674; IIIJ
MGD; MGI:109615; Mia.
                                                                                                                                                                                                                                      MEDLINE=99323974; PubMed=10395673;
                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                     01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Vav proto-oncogene (p95).
                                                                                                                                                                                                                                                                          NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                              VAV1 OR VAV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS50002; SH3; FALSE NEG. Growth factor; Signal; SH3 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO:0007160; P:cell-matrix adhesion; IMP.
GO; GO:0030198; P:extracellular matrix organization and bioge. . .; IMP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    modified and this statement is not removed entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001452; SH3. Pfam; PF00018; SH3; 1.
                                                                                                                                                  Immunol. 163:802-810(1999).
FUNCTION: Couples tyrosine kinase signals
the Rho/Rac GTPases, thus leading to cell
SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 WAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26 MPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WGGSVQGGYYGDLAARLGYFPSSIVREDLTLKPGKIDMKTDQWDFYCQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42
35
58
112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
129
113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14593 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY SIMILARITY.
BY SIMILARITY:
TL -> NS (IN REF. 1)
7, 16C957459C5BB5F9 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 248.5; DB 1; Length 130; Pred. No. 5e-19;
                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MELANOMA DERIVED GROWTH REGULATORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                       843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coved. Usage by and for commercial
  (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
ω
~•
                                                                                                                                                  with the activat differentiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1).
79 CRC64;
                                                                                                                                                                                      production
pathway.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                         Scott P.M.,
                                                                                                                                                               activation
                                                              DAG
                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ა</u>
                                                                                                                                                  and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63
```

```
밁
                                      5
                                                                                           밁
                                                                                                                                      Ş
                                                                                                                                                                                                                                                                               SOLUTION CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CO
                                                                                                                                                                                      Matches
                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
SMART; SM00023; PH; 1.
SMART; SM00025; Ph; 1.
SMART; SM00025; SH2; 1.
SMART; SM00025; SH2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG PE-bind,
Pfam; PF00169; Ph; 1.
Pfam; PF00621; RhoGEF; 1.
Pfam; PF00017; SH2; 1.
Pfam; PF00018; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR003247; CH type.
InterPro; IPR002219; DAG PE-bind.
InterPro; IPR0013319; DDS CDC24.
InterPro; IPR001849; PH.
InterPro; IPR000219; RhoGEF.
InterPro; IPR000980; SH2.
InterPro; IPR000980; SH3.
InterPro; IPR0001452; SH3.
                                                                                                                                                                                                                                                                                                    DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
PROSITE;
PROSITE;
PROSITE;
PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                  DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Guanine-nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00401; SH2DOMAIN.
PRINTS; PR00452; SH3DOMAIN.
PRINTS; PR00888; SM22CALPONIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      between the Swiss Institute of Bioinformatics and the EMBL outst
the European Bioinformatics Institute. There are no restrictions
use by non-profit institutions as long as its content is in
modified and this statement is not removed. Usage by and for com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Proto-oncogene; Phorbol-ester binding; Zinc; SH2 domain; SH3 domain; Juanine-nucleotide releasing factor; Repeat; Phosphorylation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSSP; P29354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; U39476; AAA98606.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nterPro; IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nterPro;
834 YVEED--YSE
                                                                                           785
                                        86 LVREQRVYQE 95
                                                                                                                                 26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN
                                                                                                                                                                                   23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E; PS50021; CH; 1.

E; PS00479; DAG PE BIND DOM 1; 1

E; PS50010; DAG PE BIND DOM 2; 1

FPS50010; DH 2; 1.

E; PS50001; DH 1; 1.

E; PS50001; PH_DOMAIN; 1.
                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PD000066;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PD0001527; CH_type; 1. PD0000093; SHZ; 1.
                                                                                      AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS50002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR001715; Calponin-like
                                                                                                                                                                                                                                                                            843
                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                    194
402
516
615
689
780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1GRI
                                                                                                                                                                                                                                                                            AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SH3;
                                                                                                                                                                                                                                                                                                                       373
564
658
763
                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PE-bind; 1.
                                                                                                                                                                                                                                                                          97953 MW;
                                                                                                                                                                                                  15.8%; Score 93.5; DB 32.9%; Pred. No. 0.053;
                                                                                                                                                                                   14;
                                                                                                                                                                                                                                                                                                  SH3 1.
SH2.
SH3 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                          factor;
                                                                                                                                                                                                                                                                                                                                                                       PHORBOL-ESTER AND DAG BINDING
                                                                                                                                                                                                                                                                          C4A5CACD45FCB80E CRC64;
                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                            DB 1;
                                                                                                                                                                                 20; Indels
                                                                                                                                                                                                                            Length 843;
                                                                                                                                                                                 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              outstation
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           commercia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                   88
                                                                                      833
                                                                                                                                                                               Ų.
```

RESULT 10
VAV_MOUSE
ID VAV MOUSE
AC P27870;
DT 01-AUG-1992

STANDARD;

845 AA

(Rel. 23, Created)

```
MGD; MGI:98923; Vav1.

InterPro; IPR001715; Calponin-like.

InterPro; IPR003247; CH type.

InterPro; IPR003219; DAG PE-bind.

InterPro; IPR001331; GDS_CDC24.

InterPro; IPR001849; PH.

InterPro; IPR000219; RhoGEF.

InterPro; IPR000219; RhoGEF.

InterPro; IPR000980; SH2.

InterPro; IPR001452; SH3.

InterPro; IPR001452; SH3.

InterPro; IPR003096; SM22 calponin.

Pfam; PF00307; CH; 1.
                                                                                                                                                                                                PIR; A61187; TVMSVV.
PDB; 1F5X; 15-SEP-00.
PDB; 1GCP; 28-JAN-03.
PDB; 1GCQ; 28-JAN-03.
PDB; 1K1Z; 18-DEC-02.
TRANSFAC; T01230; -.
                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                 EMBL; X64361; CAA45713.1; -. EMBL; M59833; AAA63402.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. Exp. Med. 191:463-474 (2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: Contains 1 SH2 domain.
-!- SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=20130290; PubMed=10662792;
Sosinowski T., Pandey A., Dixit V.M.,
"Src-like adaptor protein (SLAP) is a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oncogene activates its transforming potential.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Katzav S., Cleveland J.L., Heslop H.E., Pulido D., "Loss of the amino-terminal helix-loop-helix domain of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=92228488; PubMed=1565462; Adams J.A., Houston H., Allen J., Lints T., Harvey R.; Adams J.A., Houston H., Allen J., Lints T., Harvey R.; "The hematopoietically expressed vav proto-oncogene share with the dbl GDP-GTP exchange factor, the bcr gene and a (CDC24) involved in cytoskeletal organization."; Oncogene 7:611-618(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor signaling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 1-93 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata;
Mammalia; Euthería; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=91172176; PubMed=2005887;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VAV1 OR VAV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vav proto-oncogene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INTERACTION WITH SLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               not in other cell types.

PTM: Phosphorylated on tyrosine residues SIMILARITY: Contains 1 calponin-homology SIMILARITY: Contains 1 DBL-homology (DH) SIMILARITY: Contains 1 PH domain.

SIMILARITY: Contains 1 zinc-dependent pho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proliferation.
SUBUNIT: Interacts with SLA.
TISSUE SPECIFICITY: Widely expressed in hematopoietic cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: Couples tyrosine kinase the Rho/Rac GTPases, thus leading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cell. Biol. 11:1912-1920(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 23, (Rel. 42,
CH; 1.
DAG_PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            signals with the activation of to cell differentiation and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Weiss A.; negative regulator of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 phorbol-ester and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (By similarity) (CH) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               shares homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  yeast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proto-
```

```
밁
                Ş
                                       밁
                                                       Ş
                                                                                                                     Matches
                                                                                     Query Match
Best Local (
                                                                                                                                                                                                                                     SMART; SM00252; SH2; 1.

SMART; SM00326; SH3; 2.

PROSITE; PS50021; CH; 1.

PROSITE; PS00479; DAG PE BIND DOM 1; 1.

PROSITE; PS50081; DAG PE BIND DOM 2; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50010; DH 1; 1.

PROSITE; PS50001; DH 1; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH3; 2.
                                                                                                                            DOMAIN
CONFLICT
                                                                                                                                                DOMAIN
                                                                                                                                                                   DOMAIN
DOMAIN
                                                                                                                    SEQUENCE
                                                                                                                                                         DOMAIN
                                                                                                                                                                                        DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
SMART; SM00233; PH; 1.
                                                                                                                                                                                                                   Guanine-nucleotide
                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PRO0888; SM22CALPONIN.
PRODOM; PD0001527; CH type; 1.
ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00169; PH; 1. Pfam; PF00621; RhoGEF; Pfam; PF00017; SH2; 1. Pfam; PF00018; SH3; 2.
                                                                                                                                                                                                                                                                                                                                          SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00401; SH2DOMAIN PRINTS; PR00452; SH3DOMAIN
                                                                                                                                                                                                         D-structure.
                               787 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 835
               86 LVREQRVYQE 95
                                                   26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                             23;
                                                                                                                                                                                                                                                                                                                                        SM00325; RhoGEF; 1
                                                                                     Similarity
                                                                                                                  29
845 j
                                                                                                                                    1
194
402
516
617
671
782
                                                                            Conservative
                                                                                                                   A.
                                                                                                                                                                                                                Phorbol-ester binding; Zinc; ide releasing factor; Repeat;
                                                                                                                                                119
373
504
564
660
765
                                                                                  15.8%; Score 93.5; DB 32.9%; Pred. No. 0.053;
                                                                                                                   98136 MW;
                                                                          14;
                                                                                                                SH3 2.
Q -> E (IN REF. 2).
; 3666DCCD1C5229DA
                                                                                                                                              SH3
                                                                                                                                                                 PHORBOL-ESTER
                                                                           Mismatches
                                                                                 No.
                                                                                           DB 1;
                                                                                                                                                                 AND
                                                                          20;
                                                                                                                                                                                                              Phosphorylation
                                                                                                                                                                                                                          SH2 domain; SH3 domain;
                                                                                                                                                                 DAG
                                                                                                                CRC64;
                                                                                            Length 845;
                                                                          Indels
                                                                                                                                                                 BINDING
                                                                         13;
                                                                        Gaps
                                                                        ω
```

```
VAV3
Trenkle T., McClelland M., Adlkofer K., Welsh J.;
"Major transcript variants of VAV3, a new member of the
guanine nucleotide exchange factors.";
Gene 245:139-149(2000).
-i-FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS
TO A LESSER EXTENT, RAC-1. BINDS PHYSICALLY TO THE
STATES OF THOSE GTPASES (BY SIMILARITY).
                                                                                                                                                                                                                                                 VAV3_MOUSE
Q9R0C8;
16-OCT-2001
                                                                                                                                                                                                                         16-OCT-2001
15-SEP-2003
                                                                                MEDLINE=20179693; PubMed=10713454; Trenkle T., McClelland M., Adlkofe
                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                 VAV3
                                                                                                                                                                                                                                                                                              MOUSE
                                                                                                                                        NCBI_TaxID=10090
                                                                                                                                                                                                           Vav-3 protein.
                                                                                                                                                                                                                     (Rel. 40, Created)
(Rel. 40, Last seq
(Rel. 42, Last ann
                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                       Last annotation
                                                                                                                                                                                                                                    Last sequence update)
                                                                                                                                                                                                                                                                            847.AA
                                                           ar of
                                                               the
           RHOA, RHOG AND, NUCLEOTIDE-FREE
```

VAV family

ō.

```
Query Match
Best Local :
                                                                                                                     PROSITE; PS50021; CH; 1.

PROSITE; PS500479; DAG_PE_BIND_DOM_2; 1.

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.

PROSITE; PS50010; DH_2; 1.

PROSITE; PS500741; DH_1; 1.

PROSITE; PS50003; PH_DOMAIN; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50002; SH3; 2.

Phorbol-ester binding; Zinc; SH2 domain
                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                     Pfam;
Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                  DOMAIN
                                                                                 DOMAIN
                                                                                                                                                                                                                                                                   SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
                                                                      DOMAIN
                                                                                          DOMAIN
                                                                                                    DOMAIN
                                                                                                                                                                                                                 SMART;
                                                                                                                                                                                                                            SMART;
                                                                                                                                                                                                                                    SMART;
                                                                                                                                                                                                                                                        SMART;
                                                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       between
                                                                                                                                                                                                                                                                                      ProDom;
                                                                                                                                                                                                                                                                                                ProDom;
                                                                                                                                                                                                                                                                                                          PRINTS; PR00888;
                                                                                                                                                                                                                                                                                                                  PRINTS; PR00452;
                                                                                                                                                                                                                                                                                                                              PRINTS;
                                                                                                                                                                                                                                                                                                                                          Pfam;
                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00017;
                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGD; MGI:1888518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR003096;
                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY: Contains 1 calponin-homology (CH) domain.
SIMILARITY: Contains 1 DBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              binding domain.
SIMILARITY: Con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=Alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through a ceen the Swiss Institute of Bioinformatics and the EMBL
                                                                                                              ne-nucleotide
                                                                                                                                                                                                                                                                                                                                         PF00018;
                                                                                                                                                                                                                                                                                                                                                                     PF00130; DAG
PF00169; PH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P29355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF067816; AAF09171.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IsoId=Q9R0C8-1;
                                                                                                                                                                                                               SM00252; SH2; 1.
SM00326; SH3; 2.
                                                                                                                                                                                                                                               SM00233;
                                                                                                                                                                                                                                                        SM00109; C1;
SM00033; CH;
                                                                                                                                                                                                                                     SM00325;
                                                                                                                                                                                                                                                                        PD001527; CH_type; 1.
PD000093; SHZ; 1.
PD000066; SH3; 1.
  Similarity
                                                                                                                                                                                                                                                                                                                              PR00401;
                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000980;
                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR000219;
                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR001331;
IPR001849;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR003247; CH
                                                  192
400
514
592
672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :Q9R0C8-2;
                                                                                                                                                                                                                                                                                                                                                            1; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1SEM
                              AA,
                                                                                                                                                                                                                                                                                                                                         SH3;
                                                                                                                                                                                                                                                                                                                                                  SH2;
                                                                                                                                                                                                                                    RhoGEF; 1.
                                                                                                                                                                                                                                                                                                          SM22CALPONIN.
                                                                                                                                                                                                                                                                                                                      SH3DOMAIN.
                                                                                                                                                                                                                                                                                                                              SH2DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vav3
                                                 119
371
502
562
660
766
                                                                                                            releasing
                                                                                                                                                                                                                                                                                                                                                                                PE-bind; 1.
                              97946 MW;
 15.8%;
32.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            DAG PE-bind.
                                                                                                                                                                                                                                                                                                                                                                                                 SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                 RhoGEF.
                                                                                                                                                                                                                                                                                                                                                                                                                                            PH
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GDS_CDC24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Calponin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence=Not described;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence=Displayed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                splicing; Named isoforms=2;
 Score
Pred.
                                       SH3
SH2
SH3
                                                                                                   factor;
                                                                     PHORBOL-ESTER
                              9A6B63F0D9E60F8F
                                                                                                                       domain;
93.5;
No. 0
                                                                                                          Alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          There are no restrictions
DB 1;
.053;
                                                                                                                       SH3
                                                                    AND
                                                                                                                     domain; Repeat;
                                                                    DAG BINDING
                              CRC64;
        .Length 847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93
```

```
RESULT 12
VAV-HUMAN
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID - VAV H
ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                MEDLINE=92228488; PubMed=1565462;
Adame J.M., Houston H., Allen J., Lints T., Harvey R
The hematopoietically expressed vav proto-oncogene
with the dbl GDP-GTP exchange factor, the bor gene a
                                                                                                                                                                                                                                                                                             Oncogene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=96038895; PubMed=7478592;
Ramos-Morales F., Romero F., Schweighoffer F., Bismuth G.,
Tortolero M., Fischer S.;
"The proline-rich region of Vav binds to Grb2 and Grb3-3.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JAN-1995) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 299-837 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P15498; Q15860;
01-APR-1990 (Rel. 14, Created)
16-OCT-2001 (Rel. 40, Last seq
15-SEP-2003 (Rel. 42, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY TO CDC24 FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oncogene 11:1665-1669(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 299-334 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *Katzav S., Cleveland J.L., Heslop H.E., Pulido D.;
*Loss of the amino-terminal helix-loop-helix domain
oncogene activates its transforming potential.";
Mol. Cell. Biol. 11:1912-1920(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-61 FROM N.A. MEDLINE=91172176; PubMed=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Romero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ехргеввес
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Katzav S., Martin-Zanca D., Barbacid
"vav, a novel human oncogene derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Denkinger D.J., Borges C.R., "Transcriptional regulation of Submitted (OCT-1997) to the I
                                                                                                                                                                                                                                                                                  (CDC24) involved in cytoskeletal organization.", ncogene 7:611-618(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=90005432; PubMed=2477241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 62-845 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vav proto-oncogene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VAV HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     łomo sapiens (Human)
                                                   PTM: Phosphorylated on tyrosine MISCELLANEOUS: 'Vav' stands for
                                                                                 TISSUE SPECIFICITY: WIDELY EXPRESSED IN HEMATOPOIETIC NOT IN OTHER CELL TYPES.
PTM: Phosphorylated on tyrosine residues.
                                                                                                                                                                                                                                 {\tt FUNCTION:} Couples tyrosine kinase signals with the activation of the Rho/Rac GTPases, thus leading to cell differentiation and/or
     SIMILARITY:
                                                                                                                                                                                   SUBUNIT: Interacts with SLA (By
                                                                                                                                                                and Grb3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  790 LGIAIARYDFCARDMRELSLLKGDMVKIYTKM----SANGWWRGEVNGR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23 ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ed in hematopoietic cells.";
8:2283-2290(1989).
                                                                                                                                                                                                                 iferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSNLVRE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Metazoa; Chordata;
Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
Contains 1 calponin-homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=2005887;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Shaw C.L., Cushman A.M., Ko of the vav proto-oncogene."
EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                      the sixth
                                                                                                                                                                                   similarity). Interacts with Grb2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           845 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a locus ubiquitously
  (E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21;
                                                      letter of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                   R.;
e shares homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of the vav proto-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kawahara
                                                                                                                                                                                                                                                                                                                                              a yeast
                                                                                                                                  CELLS BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Camonis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - VGWF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
```

```
EMBL; AF030201; AAC25011.1; JOINED EMBL; AF030202; AAC25011.1; JOINED EMBL; AF030204; AAC25011.1; JOINED EMBL; AF030205; AAC25011.1; JOINED EMBL; AF030205; AAC25011.1; JOINED EMBL; AF030206; AAC25011.1; JOINED EMBL; AF030207; AAC25011.1; JOINED EMBL; AF030209; AAC25011.1; JOINED EMBL; AF030210; AAC25011.1; JOINED EMBL; AF030211; AAC25011.1; JOINED EMBL; AF030212; AAC25011.1; JOINED EMBL; AF030212; AAC25011.1; JOINED EMBL; AF030212; AAC25011.1; JOINED EMBL; AF030213; AAC25011.1; JOINED EMBL; AF030214; AAC25011.1; JOINED EMBL; AF030215; AAC25011.1; JOINED EMBL; AF030216; AAC25011.1; JOINED EMBL; AF030217; AAC25011.1; JOINED EMBL; AF030219; AAC25011.1; JOINED EMBL; AF030221; AAC25011.1; JOINED EMBL; AF030221; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030222; AAC25011.1; JOINED EMBL; AF030223; AAC25011.1; JOINED EMBL; AF030223; AAC25011.1; JOINED EMBL; AF030223; AAC25011.1; JOINED EMBL; AF030223; AAC25011.1; JOINED EMBL; AF030223; AAC25011.1; JOINED EMBL; AF030223; AAC25011.1; JOINED EMBL; AF030223; 
                                                                                                                                                                                                             InterPro; IPR003247; CH type.
InterPro; IPR002219; DAG PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001849; PH.
InterPro; IPR000199; RhoGEF.
InterPro; IPR000990; SH2.
InterPro; IPR0001452; SH3.
InterPro; IPR003096; SM22_calponin.
InterPro; IPR003096; SM22_calponin.
                      PRINTS;
PRINTS;
PRINTS;
                                                                                          Pfam;
                                                                                                              Pfam;
                                                                                                                                                Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG PF
Pfam; PF00169; PH; 1.
                                                                                                                                                                                                                                                                                                                                                                           MIM; 164875; -.
GO; GO:0003700; F:transcription factor activity; TAS.
GO; GO:0007048; P:oncogenesis; TAS.
InterPro; IPR0011715; Calponin-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRANSFAC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIR; B39576; TVHUVV.
HSSP; P29354; 1GRI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the Buropean Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: Contains 1 DBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 Inc-dependent phorbol-ester binding domain.
SIMILARITY: Contains 1 SH2 domain.
SIMILARITY: Contains 1 SH2 domain.
SIMILARITY: Contains 2 SH3 domains.
CAUTION: Ref.2 sequence differs from that shown due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in position 322 and 355.
                                                                                        PF00017; SH2; 1. PF00018; SH3; 2.
                                                                                                                                  PF00621; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF030227; AAC25011.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC; T00880; -.
HGNC:12657; VAV1.
PRO0401; SH2DOMAIN.
PRO0452; SH3DOMAIN.
PR00888; SM22CALPONIN.
PD001527; CH_type; 1.
                                                                                                                                                                             PE-bind; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         frameshifts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ņ
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProDom; PD000066; SH3; 1.

SMART; SM000109; C1; 1.

SMART; SM000139; CH; 1.

SMART; SM00033; CH; 1.

SMART; SM000325; RhoGEF; 1.

SMART; SM00325; SH2; 1.

SMART; SM00325; SH2; 1.

SMART; SM00325; SH2; 1.

SMART; SM00326; SH3; 2.

PROSITE; PS50021; CH; 1.

PROSITE; PS50010; DAG PE BIND DOM 1; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50001; DH 3; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH3; 1.
TISSUE=Breast, and Colon carcinoma;

MEDLINE=98371222; PubMed=9755494;

Trenkle T., Welsh J., Jung B., Mathieu-Daude F., McClelland

"Non-stoichhometric reduced complexity probes for cDNA array

Nucleic Acids Res. 26:3883-3891(1998).

-!- FUNCTION: EXCHANGE FACTOR FOR GTP-BINDING PROTEINS RHOA,

TO A LESSER EXTENT, RAC-1. BINDS PHYSICALLY TO THE NUCLE

STATES OF THOSE GTPASSES.

-!- ALTERNATIVE PRODUCTS:
                                                                                                                                   Movilla N., Bustelo X.R.;
"Biological and regulatory properties
                                                                                                                                                                                                                                                                       Q9UXW4; 095230; Q9Y5X8;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                      HUMAN
VAV3_I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
CONFLICT
SEQUENCE
                                                                                                                          Vav family of oncoproteins.";
Mol. Cell. Biol. 19:7870-7885(1999)
                                                                                                                                                                     SEQUENCE FROM N.A., AND ALTERNATIV MEDLINE=99455043; PubMed=10523675;
                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DOMAIN
DOMAIN
                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                              Vav-3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Guanine-nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proto-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProDom; PD000093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                     HUMAN
                                                                                                                                                                                                                                                                                                                                                                              836 YVEED--YSE 843
                                                                                                                                                                                                                                                                                                                                                                                                                       787 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR------VGWFPAN
                                                                                                                                                                                                                                                                                                                                                                                                                                            26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN
                                                                                                                                                                                                                                                                                                                                                                                                    86 LVREQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -oncogene; Phorbol-ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                194
402
516
617
671
782
718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ≵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SH2;
SH3;
                                                                                                                                                                                                                  Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              373
504
564
660
765
842
718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                releasing
                                                                                                                                                                               AND ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A -> P (IN REF. 2)
I -> TV (IN REF. 2)
MW; AC3BC9736FD2F138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 91.5; DB Pred. No. 0.085;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SH3 1.
SH2.
SH3 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor;
CH.
                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PHORBOL-ESTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  binding; Zinc;
factor; Repeat;
                                                                                                                                                                                                                                                                                                                      847
                                                                                                                                             of Vav-3,
                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SH2 domain; SH3 Phosphorylation
                                                                                                                                             a new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BINDING
                                                    lland M.;
arrays.";
                                                                                                                                               member of
                     RHOA, RHOG AND, NUCLEOTIDE-FREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           845;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                              85
                                                                                                                                                                                                                                                                                                                                                                                                                        835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
```

```
PRINTS; PRO0401; SH2DOWAIN.

PRINTS; PR00452; SH3DOWAIN.

PRINTS; PR00688; SM22CALPONIN.

PRINTS; PR00688; SM22CALPONIN.

PRODOM; PD001052; CH; type; 1.

PRODOM; PD001056; SH3; 1.

PR0000; PD0000066; SH3; 1.

PR0000; PR000003; CH; 1.

SMART; SM00109; CH; 1.

SMART; SM001035; RHGGEF; 1.

SMART; SM00252; RHGGEF; 1.

SMART; SM00252; SH2; 1.

SMART; SM00252; SH2; 1.

SMART; SM00252; SH2; 1.

SMART; SM00252; SH3; 2.

SMART; SM00252; SH3; 2.

PROSITE; PS00021; CH; 1.

PROSITE; PS000479; DAG PE BIND DOM 1; 1.

PROSITE; PS000479; DAG PE BIND DOM 2; 1.

PROSITE; PS00010; DH 2; 1.

PROSITE; PS00010; SH3; 1.

PROSITE; PS00001; SH3; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50001; SH3; 1.
                            DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                     Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                     Guanine-nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GO; GO:0005096; F:GTPase activator activity; TAS.
GO; GO:0005070; F:SH3/SH2 adaptor protein activity; TAS.
GO; GO:0007264; P:small GTPase mediated signal transduction; TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF118887; AAD20349 1; -.
EMBL; AF118886; AAD20348.1; -.
EMBL; AF067817; AAC79695.1; -.
HSSP; P29355; ISEM.
                                                           DOMAIN
                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH type.
InterPro; IPR002219; DAG PE-bind.
InterPro; IPR001331; GDS_CDC24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: Contains 1 calponin-homology SIMILARITY: Contains 1 DBL-homology (DH) SIMILARITY: Contains 1 PH domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=Alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                       PF00018;
                                                                                                                                                                                                                                                                                                                                                                                                                                PF00621; RhoGEF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                               PF00169; PH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF00130; DAG_PE-bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IsoId=Q9UKW4-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IsoId=Q9UKW4-2;
                                                                                                   l-ester binding; Zinc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HGNC:12659; VAV3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR001849;
IPR000219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR003096;
 192
400
514
592
672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            domain.
                                                                                                                                                                                                                                                                                                                                                                                                    SH2; 1
SH3; 1
                                                                                    releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; SH3.
; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PH.
RhoGEF.
SH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence=VSP_001820;
ng factor; Alternative splicing.
CH.
DH.
PH.
PH.
PHORDOL-ESTER AND DAG BINDING.
SH3 1.
SH2.
                                                                                                   SH2 domain;
                                                                                                 SH3 domain; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   domain
```

```
RESULT 14
VAV2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                     EMBL; U37017; AAC52761.1;
HSSP; Q60631; 1GBQ.
MGD; MGI:102718; Vav2.
                                                                                                                         entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                 use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                      family of proto-oncogenes.";
Oncogene 13:363-371(1996).
                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=96313271; PubMed=8710375; Schuebel K.E., Bustelo X.R., Nielsen D.A., Song B.J., Barbacid M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VAV2
                                                                                                                                                                                             between
                                                                                                                                                                                                                                                                                                                                                                                 Goldman D., Lee I.J.; "Isolation and characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=C57BL/6
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vav-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARSPLIC
                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                             interPro;
                                                        InterPro; IPR001715;
                                                                                                                                                                                                                                                                     of Ras-related GTPases (By similarity).
SIMILARITY: Contains 1 calponin-homology
SIMILARITY: Contains 1 DBL-homology (DH)
SIMILARITY: Contains 1 DH domain.
SIMILARITY: Contains 1 zinc-dependent pho
                                                                                                                                                            s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                SIMILARITY: Contains 1 SH2 domain. SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                             binding domain.
                                                                                                                                                                                                                                                                                                                                           FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  839 PSTYVEE 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22;
5; IPR001715; Calponin-like.
7; IPR003247; CH type.
7; IPR0032219; DAG_PE-bind.
7; IPR001331; GDS_CDC24.
7; IPR001849; PH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PSNLVRE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LGIAIARYDFCARDMRELSLLKGDVVKIYTKM----SANGWWRGEVNGR-----VGWF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107
217
298
429
847 j
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15.5%; Score 91.5; DB 1; llarity 32.8%; Pred. No. 0.086; Conservative 13; Mismatches 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       788
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Mouse).
                                                                                                                                                                                                                                                                                                                                        Guanine nucleotide exchange
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107
217
298
429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     847
107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ž.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P (in isoform Beta).
/FIId=VSP_001820.
K -> E (IN REF. 2).
Y -> H (IN REF. 1; AAD20348).
T -> S (IN REF. 2).
V -> A (IN REF. 1; AAD20348).
W; C1E29F0B094CB721 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CETFGMRKSELFEAFDLFDVRDFGK -> P (in isoform boar)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEPWKQCAQWLIHCKVLPTNHRVTWDSAQVFDLAQTLRDGV
LLCQLLNNLRAHSINLKEINLRPQMSQFLCLKNIRTFLTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                of murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                868 AA
                                                                                                                                   (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                vav2, a member of the
                                                                                                                                                                                                                                                                        phorbol-ester
                                                                                                                                                                                                                                                                                                                                         factor for the
                                                                                                                                                  Usage by
                                                                                                                                                                                                                                                                                                               (H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 847;
                                                                                                                                                                                                                                                                                                               domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838
```

```
RESULT 15
                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS50021; CH; 1.

PROSITE; PS500479; DAG PE BIND DOM 1; 1.

PROSITE; PS50081; DAG PE BIND DOM 2; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50011; DH 1; 1.

PROSITE; PS50003; PH DOMAIN; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom; PD001527; CH type; 1.
ProDom; PD0000093; SH2; 1.
ProDom; PD000066; SH3; 2.
SMART; SM00109; Ct; 1.
SMART; SM00003; CH; 1.
SMART; SM00023; PH; 1.
SMART; SM00233; PH; 1.
SMART; SM00233; RhoGEF; 1.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 2.
                                                                        P52735;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequ
28-FEB-2003 (Rel. 41, Last ann
   SEQUENCE FROM N.A
                    NCBI_TaxID=9606;
                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                 Homo sapiens (Human)
                                                                                                                          HUMAN
                                                                   Vav-2 protein.
                                                                                                                                                                                                                                                                                                                              MOD_RES
                                                                                                                 VAV2_HUMAN
                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam;
                                                                                                                                                                                                                                                                                            MOD_RES
                                                                                                                                                                                                                                                                                                             MOD_RES
                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00401; SH2DOMAIN. PRINTS; PR00452; SH3DOMAIN.
                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                    Phorbol-ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000219;
InterPro; IPR000980;
                                                                                                                                                                                                   802
                                                                                                                                                                                                                                                                                                                                                                                                           ne-nucleotide
                                                                                                                                                                                77
                                                                                                                                                                                                                20 VYT---ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEM 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PF00018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF00130; DAG PE-bind; 1. PF00169; PH; 1.
                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                              VFTPRVIGTAVARYNFAARDMRELSLREGDVVKIYSRIGGDQG---WWKG-----ETN 851
                                                                                                                                                             GRIGWFPSTYVEEEGV 867
                                                                                                                                                                               GIVGYFPSNLVREQRV 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR001452;
                                                                                                                                                                                                                                                                           898
                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                             172
                                                                                                                                                                                                                                                                                                                                          193
400
514
576
663
806
                                                                                                                                                                                                                                                                                                              159
                                                                                                                                                                                                                                                                                                                                                                                                         binding; Zinc;
otide releasing
                                                                                                                                                                                                                                                                          8
                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RhoGEF; 1.
                                                                                                                                                                                                                                                                          99915 MW;
                                                                                                                                                                                                                                             14.5%;
                                                                          Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SH3.
                                                                                                                                                                                                                                     19;
                                                                                                                                                                                                                                                                                          PHOSPHORYLATION SIMILARITY).
PHOSPHORYLATION
                                                                                                                                                                                                                                                                                                                                                                   DH.
PHORBOL-ESTER i
                                                                                                                                                                                                                                             Score 85.5;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                               SH2 domain; SH3 factor; Repeat; CH.
                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                   SIMILARITY)
                                                                                                                                                                                                                                                                                                                        PHOSPHORYLATION SIMILARITY).
                                                                                                                 PRT;
                                                                                                                                                                                                                                                                         D18581E7EEB2DBC2 CRC64;
                                                                                                                                                                                                                                      Mismatches
                                                                                                                 878
                                                                                                                                                                                                                                             0.37;
                                                                                                                ζ
                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                     AND DAG BINDING
                                                                                                                                                                                                                                    22;
                                                                                                                                                                                                                                                                                                             YB)
                                                                                                                                                                                                                                                                                                                                (BY
                                                                                                                                                                                                                                                                                            (BY EGFR)
                                                                                                                                                                                                                                                                                                                                                                                                        Phosphorylation
                                                                                                                                                                                                                                                                                                                                                                                                                  domain;
                                                                                                                                                                                                                                                      Length 868;
                                                                                                                                                                                                                                                                                                             EGFR)
                                                                                                                                                                                                                                                                                                                                EGFR) (BY
                                                                                                                                                                                                                                     Indels 13;
                                                                                                                                                                                                                                                                                                             (BY
                                                                                                                                                                                                                                   Gaps
MIM; 600428;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Brain
```

```
use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tamas P., Solti Z., Bauer P., Illes A., Sipeki S., E Farago A., Downward J., Buday L.; Farago A. Downward J., Buday L.; "Mechanism of epidermal growth factor regulation of nucleotide exchange factor for Rac."; J. Biol. Chem. 278:5163-5171(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Henske E.P., Short M.P., Jozwiak S., Bovey C.M., R
Haines J.L., Kwiatkowski D.J.;
"Identification of VAV2 on 9934 and its exclusion
sclerosis gene TSC1.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=22464432; PubMed=12454019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ann. Hum. Genet. 59:25-37(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PHOSPHORYLATION OF TYR-142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=95283235; PubMed=7762982;
                                                                                                                                                                                                                                                                                         binding domain.
SIMILARITY: Contains 1 SH2 domain.
SIMILARITY: Contains 2 SH3 domains.
                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE SPECIFICITY: Widely expressed.
SIMILARITY: Contains 1 Calponin-homology (CH) domain.
SIMILARITY: Contains 1 BBL-homology (DH) domain.
SIMILARITY: Contains 1 PH domain.
SIMILARITY: Contains 1 zinc-dependent phorbol-ester and DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3iol. Chem. 278:5163-5171(2003).
FUNCTION: Guanine nucleotide exchange factor for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYR-159 AND TYR-172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bovey C.M., Ramlakhan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     as the tuberous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bauer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vav2, a guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rho family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :
:
```

PROSITE; PS50021; CH; 1.
PROSITE; PS00479; DAG PE BIND DOM 1; 1.
PROSITE; PS50081; DAC PE BIND DOM 2; 1.
PROSITE; PS50010; DH 2; 1.
PROSITE; PS500741; DH 1; 1.
PROSITE; PS50003; PH DOMAIN; 1.
PROSITE; PS50001; SH3; 1.
PROSITE; PS50001; SH3; 1. Pfam; PF00017; SH2; 1.

Pfam; PF00017; SH2; 1.

Pfam; PF00018; SH3; 2.

PRINTS; PR00401; SH2DOMAIN.

PRINTS; PR00452; SH3DOMAIN.

PRODOm; PD001527; CH_Uype; 1.

PRODom; PD000066; SH3; 2.

SMART; SM00109; C1; 1.

SMART; SM00033; CH; 1.

SMART; SM0033; RhGGEF; 1.

SMART; SM00253; RhGGEF; 1.

SMART; SM00326; SH3; 2.

SMART; SM00326; SH3; 2. Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG PB-bind; 1.
Pfam; PF00169; PH; 1.
Pfam; PF00621; RhoGEF; 1.
Pfam; PF00017; SH2; 1. InterPro; IPR001849; FI InterPro; IPR000219; FI InterPro; IPR000980; SI InterPro; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001452; STATE INTERPRO; IPR001849; FI INTERPRO; IPR000219; FI INTERPRO; IPR001849; EMBL; S76992; AAB34377.1; -. PIR; I51940; I51940. HSSP; P08631; IBU1. InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH_type.
InterPro; IPR003219; DAG_PE-bind.
InterPro; IPR001331; GDS_CDC24. Genew; HGNC:12658; VAV2. 002; SH3; 2.
binding; Zinc; SH2 domain; SH3 domain; RhoGEF. SH2.

B

밁 Ş

```
EX. Guanine-nucleotide releasing factor; Repeat; Phosphorylation.

PT DOMAIN 198 376

PT DOMAIN 405 512

PT DOMAIN 405 512

PT DOMAIN 524 572

PHORBOL-ESTER AND DAG BINDING.

PT DOMAIN 524 572

PHORBOL-ESTER AND DAG BINDING.

PT DOMAIN 673 767

PT DOMAIN 816 877

PT DOMAIN 816 877

PT DOMAIN 816 877

PT MOD_RES 159 159

PHOSPHORYLATION (BY EGFR).

PT MOD_RES 172 172

PHOSPHORYLATION (BY EGFR).

PT MOD_RES 172 172

PHOSPHORYLATION (BY EGFR).

PT MOD_RES 172 172

PHOSPHORYLATION (BY EGFR).

PT MOD_RES 172 172

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY EGFR).

PHOSPHORYLATION (BY
```

٠-

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein - protein search, using sw model
                                                                                                                                                                                                                                                    SPTREMBL 23:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    December 29, 2003, 16:03:18; Search time 16.9468 Seconds (without alignments) 1674.996 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              830525 segs, 258052604 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                            sp_plant:*
sp_rodent:*
sp_virus:*
                                                                                                                                                                                        sp_mhc: *
                                                                                                                                                        sp_phage: *
                                                                                                                                                                        sp_organelle:*
                                                                                                                                                                                                                                    sp_invertebrate:*
sp_archeap:*
                  sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
                                                                          sp_vertebrate: *
                                                                                                                                                                                                                  mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

16	<u>1</u>	14	13	12	11	10	9	- α	7	6	vı	4	د ا) N	· -		No.	Pasi It
82	86.5	91.5	93.5	93.5	93.5	93.5	93.5	108	156.5	165.5	176.5	182	215	215	234.5		Score	
13.9	14.6	15.5	15.8		15.8	15.8		18.3			29.9	30.8	36.4	36.4	39.7	1 1 1 1 1 1	Match 1	0101
827	839	719	846	845	806	287	166	68	119	. 119	88	137	1239	268	96	1	Length	
13	13	4	3	11	H	11	11	11	11	4.	13	11	11	11	11		DB	
QBUWE6	Q8UUX5	Q96D37	9XUU8Q	Q8BTV7	QBVDU4	Q8R076	008526	Q8C899	Q91ZV0	Q96PC5	Q90XF1	Q921X3	Q8BI84	Q8BJE9	Q9JI09		ID	
Q8uwe6 tetraodon n	Q8uux5 gallus gall	Q96d37 homo sapien		7 mus	4 mus	Bum	Bug	mus	Q91zv0 mus musculu		tet		mus	Q8bje9 mus musculu	Q9ji09 mesocricetu		Description	

밁 Ś

1 LADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLFWGG 8 LSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYYYSKLVTENGAG-AFWAG 66

57

μ <u>.</u>	44	43	42	41	40	39	8	37	36	3 5	34	ü	32	1	30	29	28	27	26		24	23		21	20		18	17
72	72.5		72.5	72.5	72.5	73	73	73	73	73	73	73.5		74	75.5	75.5	75.5	76	76	76	76		76	77	78.5	78.5	78.5	œ
12.2	12.3	12.3	12.3	12.3	12.3	٠		12.4	12.4	12.4	12.4	12.4	12.4	12.5	12.8	12.8	12.8	12.9	12.9	٠	12.9	12.9	12.9		13.3		13.3	13.3
630	1431	1430	1154	839	498	850	641	479	479	352	352	847	533	994	1215	635	259	1430	1257	643	638	615	344	413	1196	1196	636	365
10	4.	11	4,	10	4	11	10	10	10	10	10	4.	v	v	ഗ	10	10	w	σı	10	10	10	10	p. .a	4	4.	10	11
Q9ARM8	Q8WXD9	Q8VHK2	Q9P2P0	Q94F88	Q9H803	Q9JJ15	Q9ATQ6	Q9SYV1	Q43366	Q94EK5	Q94EK2	Q16584	OIYMBD	Q93575	077202	Q9FU01	Q8RZZ8	Q9VMA7	Q9VMA8	Q9FU04	Q9ATQ5	Q94E30	Q9FU07	093709	Q8N157	Q9H0H2	Q9FTZ8	Q9СХН0
Q9arm8 oryza sativ	2	2 rati	7	ara			triticu	allium	allium	allium wak	N	homo sapie		Q93575 caenorhabdi	acantha	Q9fu01 oryza sativ	Q8rzz8 oryza sativ	Q9vma7 drosophila	drosop	oryz	tritic		7 oryza	sulf	homo	homo sa	oryz	Q9cxh0 mus musculu

ALIGNMENTS

```
Matches
                       Query Match
Best Local :
                                                             NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                 Q9JI09;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Melanoma inhibitory activity protein (Fragment).
Mesocricetus auratus (Golden hamster).
                                                                                                                                                                          "Overexpression of MIA enhances extravasation and metastasis of A-mel3 melanoma cells.";
Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: COUTAINS 1 SH3 DOWAIN.
EMBL; AF271694; AAF76220.1; -.
HSSP; Q16674; 111J.
                                                                                                    SH3 domain.
                                                                                                                                Pfam; PF00018; SH3; 1.
SMART; SM00326; SH3; 1.
                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                   PROSITE; PS50002; SH3; 1.
                                                                                                                                                                                                                                                              Jauch K.W.;
                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                    Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                601L6
                                                                                                                                                           InterPro; IPR001452; SH3.
                    Local Similarity
        45;
                                                                                                                                                                                                                                                                   Bosserhoff A.K., Steinbauer M., Anthuber M., Buettner R.,
                                                             96 AA;
        Conservative
                                                                           96
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                           10756 MW; E7B466C3B5505BFB CRC64;
39.7%; Score 234.5; DB 11; Length 96; 46.4%; Pred. No. 1.8e-18; ative 21; Mismatches 26; Indels 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             96 AA.
    υ
••
    Gaps
```

```
Q8BULT 3
Q8BI 84
ID Q8BI
AC Q8BI
AC Q8BI
DT 01-M
DT 01-M
DT 01-M
DT 01-M
DT 01-M
DT 01-M
Euka
OS Muss
OC Euka
OS Muss
OC Fuka
The
RN (1)
RN (1)
RN (1)
RP SEQU
RC STRA
RX MEDI.
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA The
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
RA THE
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
Q8BJE9
        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                         Matches
                                                                                                                     Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OBBI84,
01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Weakly similar to NPIP-like protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Weakly similar to NPIP-like protein (Fragment).
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                            the RIKEN Genome Exploration Research Group "Analysis of the mouse transcriptome based o 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=C57BL/6J; TISSUE=Eye; MEDLINE=22354683; PubMed=12466851; The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          оввле9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/6J; TISSUE=Retina;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8BI84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Analysis of the mouse transcriptome based on functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the RIKEN Genome Exploration Research Group Phase I & II Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QввлЕ9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FANTOM Consortium
                                                                                                                                                                                                                                                                                    AK044749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AK084344; BAC39164.1; -.
ER 268 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83 LELWAGSV--EHS-----FGYFPKDLIKVLHKYTEEELHIPADETDFVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 109
                                                                                     45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28 HGR---RESDLKVCGDEECSMLMYRGKALEDFTGPDCREVNFKKGDDVYVYYKLA--GGS
1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPT 102
                                                                                                                                                                                                                                       1239 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          268 AA;
                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                           BAC32064.1; -.
AA; 136350 MW;
                                                                             36.4%; Score 215; DB 11;
41.3%; Pred. No. 6.2e-15;
tive 13; Mismatches 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29722 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36.4%; Score 215; DB 11;
41.3%; Pred. No. 9.6e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67339C562F684402 CRC64;
                                                                                                                                                                                                                                           6E16F9D42ECEFF05 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ą
                                                                                                                                                                                                                                                                                                                                                                                                  ខ្ព
                                                                                                                                                                                                                                                                                                                                                                                              Phase I & II Team;
on functional annotation
                                                                                 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 268;
                                                                                                                                                          Length 1239;
                                                                                 Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Murinae; Mus
                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             o
H
                                                                                                         PART DE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SORRER RESERVED DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA CONTRACTOR DE LA C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q90XF1
                                                                                                                                                          NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDRAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q921X3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q921X3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç
```

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q90XF1;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                  InterPro; IPR001452; SH3. Pfam; PF00018; SH3; 1. SMART; SM00326; SH3; 1.
                                                                                                                                                                                     "Characterization of the MIA gene family.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF390176; AAL26991.1; -.
                                                                                                                                                                                                                                                                                                                                                       Melanoma inhibitory activity protein (Fragment).
Tetraodon nigroviridis (Green puffer).
Eukaryota, Metazoa, Chordata, Farniata, Vertebrata, Euteleostomi, Eukaryota, Metopterygii, Teleostei, Euteleostei, Neoteleostei, Acanthomorpha, Acanthopterygii, Percomorpha, Tetraodontiformes, Tetraodontoidea, Tetraodontidae, Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; BC009815; AAH09815.1; MGD; MGI:109615; Cdrap. InterPro; IPR001452; SH3. Pfam; PF00018; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=99883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similar to cartilage derived retinoic
                                                                                                                                                                                                                                                             Bosserhoff A.K., Buettner R.;
                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg R.;
Submitted (JUL-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26 MPKLADWKLCADBECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83 LELWAGSV--EHS-----FGYFPKDLIKVLHKYTEEELHIPADETDFVC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28 HGR---RFSDLKVCGDEECSMLMYRGKALEDFTGPDCRFVNFKKGDDVYVYYKLA--GGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM00326; SH3;
CE 137 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WGGSV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WAGSV 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 109
                                                                        88 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                        10080 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15441 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30.8%;
  29.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL/GenBank/DDBJ databases.
Score 176.5;
Pred. No. 4.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 182;
Pred. No.
                                                                        C355C1FE04DA22EA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           971415552E6FD536 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acid sensitive
.5; DB 13;
4.9e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 11; Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82
```

Ś 밁

밁

á

83

```
RESULT

Q912VO

ID ZVO

ID ZVO

O9

DT 011

DT 011

DT 011

DT 011

DT 011

RN 01

RN 11

RR 0 SE

RC T11

RR 0 SE

RG SE

SQ SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
                Query Match
Best Local S
Matches 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                         TISSUB-Embryo;
Bosserhoff A.K., Buettner R.;
Characterization of the MIA gene family.";
"Characterization of the EMBL/GenBank/DDBJ databases.
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF390177; AAL26992.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O91ZVO;
O1-DEC-2001 (TrEMBLrel. 19, Created)
O1-DEC-2001 (TrEMBLrel. 19, Last sequence update)
O1-MAR-2003 (TrEMBLrel. 23, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                           InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04ZZA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Characterization of the MIA gene family.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF390175; AAL26990.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Melanoma inhibitory activity protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bosserhoff A.K., Buettner R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q96PC5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q96PC5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rissus=Embryo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                              _TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26
                l Similarity
37; Conserv
                                                                                                                                                    SM00326; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               58 - IGHFPSSIVEETHPLMAAQTEVKTSNWDFYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  78 IVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23 ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGA-FWAGSV----YGDHQDEMG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SM00326; SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KGKE-----FGYFPRDAVQIEEVFISEEIQMSTKESDFLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LADIKKCGDLECEALINRVSAMRDYRGPDCRYLNFTKGEEISVYVKLAGER--EDLWAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMIARALQDYYPADCXFIPIRQGQLIYVYAML---KGRGSQFWAGSVQDSYYGQQEAR--
                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                        AΑ;
                                                                                                                           13397 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Primates;
                                          26.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13535 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28.0%; Score 165.5;
36.3%; Pred. No. 1.20
cive 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16;
           Score 156.5; DB:
Pred. No. 1.2e-09;
3; Mismatches 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Ve
Catarrhini;
                                                                                                                        589F390C0B49D1C7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AEF529762D880AC5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.2e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                             DB 11; Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 119;
              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9;
           9
           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57
           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4;
        DR RELEASE DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CORRES DE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           008526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   008526;
                                                                                                                                                                                                                                   Okumura K., Kaneko Y., Nonogushi K., Nishiyama H., Yokoi H., Higuchi T., Itoh K., Yoshida O., Miki T., Fujita J.; "Expression of a novel isoform of Vav, Vav-T, containing a single Srchomology 3 domain in murine testicular germ cells.";
InterPro; IPR001452; Pfam; PF00017; SH2; 1 Pfam; PF00018; SH3; 1
                                                  InterPro; IPR000980; SH2. InterPro; IPR001452; SH3.
                                                                                                                MGD.
                                                                                                                                    EMBL; D83266; BAA18950.1;
HSSP; Q60631; 1GBQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                      Oncogene 14:713-720(1997).
-!- SIMILARITY: CONTAINS 1 SH3 DOMAIN.
                                                                                                                                                                                                                                                                                                                                                      STRAIN=ddy; TISSUE=Testis;
MEDLINE=97190224; PubMed=9038379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUL-1997
01-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the RIKEN Genome Exploration Research Group Phase I Manalysis of the mouse transcriptome based on function 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
EMBL; AK047965; BAC33202.1; -.
SEQUENCE 68 AA; 7431 MW; 3CBE75527D3CBF7F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Otoraplin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08C899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8C899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ocal
                                                                                                          MGI:98923; Vav.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68 VYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HGVFMDKLSSKKLCADEECVCKALLTVWFSLSFYHIMGNLSGKQPDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HGMFMDKLSSKKLCADEECV------YTISLARAQEDYNA--PDC 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KGKD----FGYFPRDAVQIEEVFISEEIQMSTKESDFLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LAHLKKCGDLECETLISRVLALRDYTGPDCRYLNFTTGEEISVYVKLGGDR--EDLWAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Head
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23, Created)
23, Last sequence 23, Last annotations and the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 108; UB 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           p Phase I & II Team;
on functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
```

ō,

N

밁 Ş 밁 Ş

```
RESULT 11
Q8VDU4
ID Q8VDU
AC Q8VDU
DT 01-MA
DT 01-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SARABARAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00017; SH2; 1.
ProDom; PF000003; SH2; 1.
ProDom; PF0000066; SH3; 1.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD000093; SH2; 1.
ProDom; PD000066; SH3; 1.
SMART; SM00252; SH2; 1.
SMART; SM00255; SH3; 1.
PROSITE; PS50001; SH3; 1.
PROSITE; PS50002; SH3; 1.
  Q8VDU4;
01-MAR-2002 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Strausberg R.;
Strausberg R.;
Submitted (APR-2002) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical 32.7 kDa protein.
                                                                             Q8VDU4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS50001; SH2; 1. PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SH3 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGD; MGI:1888518; Vav3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8R076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8R076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00452; SH3DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                  230 LGIAIARYDFCARDMREISLLKGDMVKIYTKM----SANGWWRGEVNGR------VGWF 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       157 YVEED--YSE 164
                                                                                                                                                                                                                                        83 PSNLVRE 89
                                                                                                                                                                                                                                                                                                                                23 ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BC027242; AAH27242.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86 LVREQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                             PSTYVEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       166 AA; 19434 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287 AA; 32662 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                             285
                                                                                                                                                                                                                                                                                                                                                                                                      15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi;
    20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                13; Mismatches
    Created)
Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                 Score 93.5; DB Pred. No. 0.037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 93.5; DB Pred. No. 0.019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BF2850B8F921F048 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2C3AF1FF07A5018F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     287
                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                            DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20;
                                                                                                                                                                                                                                                                                                                                                                                21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                              Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                          Length 287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13;
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
QUBITY7
ID QUARTON
AC QUARTON
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000
DT 000

                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                     RESULT 12
```

```
SOCORRAR RANGE OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCIETY OF SOCI
                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
PROSITE;
PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF03915; AIP3; 1.
Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG_PB-bind; 1.
Pfam; PF00169; PH; 1.
                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProDom; PD001527; CH_type; ProDom; PD000093; SH2; 1. ProDom; PD000066; SH3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00621; RhoGEF; 1. Pfam; PF00017; SH2; 1. PRINTS; PR00452; SH3DOMAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; BC020487; AAH20487.1; -. MGD; MGI:98923; Vav.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2003 (TrEMBLrel. 23, Last annotation update) Similar to vav oncogene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00452; SH3DOMAIN.
PRINTS; PR00888; SM22CALPONIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH type.
InterPro; IPR0032219; DAG_PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001349; PH.
InterPro; IPR000219; RhoGEF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR001452; SH3.
InterPro; IPR003096; SM22_calponin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ·!- SIMILARITY: CONTAINS
                                                                                               SM00109; C1; 1.; SM00033; CH; 1.; SM00033; PH; 1.; SM00233; PH; 1.; SM00325; RhoGEF; 1.
797 YVEED--YSE 804
                                                 86 LVREQRVYQE 95
                                                                                                                                              26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SM00252; SH2; 1.
SM00326; SH3; 2.
                                                                                                                                                                                                     23;
                                                                                                                                                                                                                                                                                                                       E; PS50021; CH; 1.
E; PS500479; DAG PE BIND DOM 1; 1
E; PS50081; DAG PE BIND DOM 2; 1
E; PS50010; DH 1; 1.
E; PS50010; DH 2; 1.
E; PS50010; DH 2; 1.
E; PS50001; SH3; 2.
E; PS50001; SH3; 2.
                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
                                                                                                                                                                                                                                                                                                  806 AA;
                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                  93868 MW; F4368CD13A62D695 CRC64;
                                                                                                                                                                                                                         15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SH2.
SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PH DOMAIN
                                                                                                                                                                                               14;
                                                                                                                                                                                                                         Score 93.5; DB Pred. No. 0.13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                 DB 11; Length 806;
                                                                                                                                                                                               20;
                                                                                                                                                                                               Indels
                                                                                                  ----IGWFPSN
                                                                                                                                                                                               13;
                                                                                                                                                                                               Gaps
                                                                                                  796
                                                                                                                                                 85
```

OBBTV7 PRELIMINARY; PRT; 845 AA.
GBSTV7; O1-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)

w

VAV proto-oncogene. Mus musculus (Mouse).

SOR REPERENCE OF THE PROPERTY

```
Kurosaki T.;

"Vav3 Modulates B Cell Receptor Responses by Phosphoinositide 3-Kinase Activation.";

J. Exp. Med. 195:189-200(2002).

-:- SIMILARITY: CONTAINS 2 SH3 DOMAIN.

-:- SIMILARITY: CONTAINS 1 PH DOMAIN.

EMBL; AV046915; AAL06249.1; --

InterPro; IPR001715; Calponin-like.

InterPro; IPR001715; Calponin-like.

InterPro; IPR001715; DAG PE-bind.

R InterPro; IPR001311; GDS-CDC24.

R InterPro; IPR00131; GDS-CDC24.

R InterPro; IPR001396; PH-

R InterPro; IPR0001899; PH-

R InterPro; IPR0001899; SH3.

R InterPro; IPR000189; SH3.

R InterPro; IPR001452; SH3.

R InterPro; IPR001452; SH3.

R InterPro; IPR001452; SH3.

R InterPro; IPR001452; SH3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 23
                                                                                        Pfam; PF00307; CH; 1.
Pfam; PF00130; DAG PE-bind; 1.
Pfam; PF00169; PH; 1.
Pfam; PF00621; RhoGEF; 1.
Pfam; PF00017; SH2; 1.
Pfam; PF00018; SH3; 1.
                                                             Pfam; PF
PRINTS;
PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8UUX6;
01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
GDP/GTP exchange factor VAV3.
                                                 PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                  Inabe K., Ishiai M., Scharenberg A.M., Freshney N., Downward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs."; Nature 420:563-573 (2002).

EMBL; AKO88586; BAC40436.1; -.
SEQUENCE 845 AA; 98093 MW; 5D0DE0D9311DFB8B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=11805146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9xuux6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=NOD; TISSUE=Thymus; MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         836 YVEED--YSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              787 AKARYDFCARDRSEISLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWPPSN
                ; PR00401; SH2DOMAIN.
; PR00452; SH3DOMAIN.
; PR00885; SM22CALPONIN.
; PD001527; CH type; 1.
; PD000093; SHZ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86 LVREQRVYQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi;
Veognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.8%; Score 93.5; DB 32.9%; Pred. No. 0.14; tive 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Å
                                                                                                                                                                                                                                                                                                                                                                                        by Regulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 845;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              835
               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PRO0401; SH2DOMAIN.
PRINTS; PR00452; SH3DOMAIN.
PRINTS; PR00452; SH3DOMAIN.
PRODOM; PD0000093; SH2; 1.
PRODOM; PD0000066; SH3; 1.
SMART; SM00109; C1; 1.
SMART; SM00233; PH; 1.
SMART; SM00253; RhOGEF; 1.
SMART; SM00325; RHOGEF; 1.
SMART; SM00326; SH3; 2.
PROSITE; PS50081; DAG_PE_BIND_DOM_2;
PROSITE; PS50081; DAG_PE_BIND_DOM_2;
                                                                                                                                                                -!- SIMILARITY: CONTAINS 2 SH3 DOMAINS.
-!- SIMILARITY: CONTAINS 1 PH DOMAIN.
EMBL; BC013361; AAH13361.1; -.
InterPro; IPR002219; DAG PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR00149; PH.
InterPro; IPR000219; RhoGEF.
InterPro; IPR000219; SH2.
InterPro; IPR000452; SH3.
Pfam; PF00130; DAG PE-bind; 1.
Pfam; PF00169; PH; 1.
Pfam; PF00169; PH; 1.
Pfam; PF00017; SH2; 1.
Pfam; PF00018; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00325; RhoGEF; 1.

SMART; SM00252; SH2; 1.

SMART; SM00252; SH3; 2.

SMART; SM00252; SH3; 2.

PROSITE; PS50021; CH; 1.

PROSITE; PS50021; DAG_PE_BIND_DOM_1; 1.

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.

PROSITE; PS50010; DH 1; 1.

PROSITE; PS50010; DH 2; 1.

PROSITE; PS50001; SH2; 1.

PROSITE; PS50001; SH3; 1.

PROSITE; PS50002; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q96D37;
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                  Strausberg R.;
Submitted (AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypothetical protein. Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SH3 doma:
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q96D37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00109; C1; 1.
SMART; SM00033; CH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838 PSTYVEE 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23 ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83 PSNLVRE 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SM00233; PH; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.8%; Score 93.5; DB 13; Length 846; Similarity 34.3%; Pred. No. 0.14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PD000066;
                                                                                                                                                                                                                                                                                                                                                              (AUG-2001) to the EMBL/GenBank/DDBJ databases.
RITY: CONTAINS 2 SH3 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  846 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel. 19, Created)
(TrEMBLrel. 19, Last sequence update)
(TrEMBLrel. 23, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SH3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97815 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C47EE949D873821B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             719 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
```

4. 12. 3 B Sec. 44

밁 S В S

```
RESULT OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY OR COUNTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AY046916; AAL06250.1; ...
InterPro; IPR001715; Calponin-like.
InterPro; IPR003247; CH_type.
InterPro; IPR003247; DAG PE-bind.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001331; GDS_CDC24.
InterPro; IPR001849; PH.
InterPro; IPR001219; RhoGEF.
InterPro; IPR001219; RhoGEF.
InterPro; IPR001849; SH3.
Pfam; PF00130; DAG PE-bind; 1.
Pfam; PF00130; DAG PE-bind; 1.
Pfam; PF00101; RhoGEF; 1.
                                                             Pfam; PF00018; SH3; 2.
PRINTS; PR00401; SH2DOMAIN.
PRINTS; PR00452; SH3DOMAIN.
PRODOm; PR004527; CH type; 1.
ProDom; PD001527; CH type; 1.
ProDom; PD000066; SH3; 2.
SMART; SM00109; C1; 1.
SMART; SM00109; C1; 1.
SMART; SM00233; CH; 1.
SMART; SM00233; PH; 1.
SMART; SM00233; PH; 1.
SMART; SM00233; PH; 1.
SMART; SM00252; SH05EF; 1.
SMART; SM00326; SH3; 2.
SMART; SM00326; SH3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00741; DH_1; 1.

PROSITE; PS50010; DH_2; 1.

PROSITE; PS50001; PH_DOMAIN; 1.

PROSITE; PS50001; SHZ; 1.

PROSITE; PS50001; SH3; 2.

PROSITE; PS50002; SH3; 2.

Hypothetical protein; SH3 domain.

SEQUENCE 719 AA; 83727 MW; A5
PROSITE; PS50021; CH; 1.
PROSITE; PS00479; DAG_PE_BIND_DOM_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QBUUX5, PRELIMINARY; PRT; 839 AA.
QBUUX5,
QBUUX5,
QBUUX5,
QBUUX5,
Q1-MAR-2002 (TrEMBLrel. 20, Created)
Q1-MAR-2002 (TrEMBLrel. 20, Last sequence update)
Q1-MAR-2003 (TrEMBLrel. 23, Last annotation update)
GDP/GTP exchange factor VAV2.
VAV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inabe K., Ishiai M., Scharenberg A.M., Freshney N., Downward J.,
Kurosaki T.;
"Vav3 Modulates B Cell Receptor Responses by Regulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phosphoinositide 3 Kinase Activation.",
J. Exp. Med. 195:189-200(2002).
-i- SIMILARITY: CONTAINS 2 SH3 DOMAINS.
-i- SIMILARITY: CONTAINS 1 PH DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=11805146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     710 YVEED--YSE 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661 AKARYDFCARDRSELSLKEGDIİ----KILNKKGQQGWWRGEIYGR-----VGWFPAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86 LVREQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.5%; Score 91.5; DB 4; 32.9%; Pred. No. 0.19; tive 14; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     domain.
MW; A51B757DA543BA6C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 719;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
Ş
Search completed: December 29, 2003, 16:06:27 Job time : 16.9468 secs
                                                     밁
                                                                            Ś
                                                                                                        片
                                                                                                                                                                                                                SARBBBBB
                                                                                                                                                         Query Match
Best Local S
Matches 23
                                                                                                                                                                                                                          PROSITE; PS:
SH3 domain.
                                                                                                                                                                                                                                                   PROSITE;
PROSITE;
PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                               SEQUENCE
                                                     823
                                                                                                        773
                                                                             77 GIVGYFPSNLVREQRV 92
                                                                                                                                20 VYT---ISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEM
                                                                                                                                                                                                                                      E; PS50081; DAG_PE_BIND_DOM_2; 1.

E; PS500141; DH_1; 1.

E; PS50010; DH_2; 1.

E; PS50003; PH_DOMAIN; 1.

E; PS50001; SH2; 1.

E; PS50002; SH3; 2.
                                                                                                                                                                       Similarity
                                                     GRVGWFPSTYVEEEGV
                                                                                                        VFTPRVIGTAVARYNFAARDMRELSLREGDVVKIYSRIGGDQG---WWKG-----ETN 822
                                                                                                                                                                                                               839 AA; 97500 MW;
                                                                                                                                                            Conservative
                                                                                                                                                         14.6%; Score 86.5; DB 13; 30.3%; Pred. No. 0.83; tive 18; Mismatches 22;
                                                     838
                                                                                                                                                                                                                6C1322ABAC23A530 CRC64;
                                                                                                                                                                                   Length 839;
                                                                                                                                                            Indels
                                                                                                                                                            13;
                                                                                                                                                         Gaps
                                                                                                                                  76
```

```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq. length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December 29, 2003, 16:03:18 ; Search time 21.5686 Seconds (without alignments) 809.506 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-49
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A_Geneseq_19Jun03:*
1: /SIDS1/gcgdata/go
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1107863 seqs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 , Gapext 0.5
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
| SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HGMFMDKLSSKKLCADEECV.....RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1107863
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

v	ω	7	σn	ហ	4	w	N		No.	Pacial t	
541	541	541	541	541	574	574	591	591	Score		
91.5	91.5	91.5	91.5	91.5	97.1	97.1	100.0	100.0	Match		P
128	128	128	128	110	128	110	128	110	Match Length DB		
23	23	22	22	22	22	22	22	22	BB		
ABB84996	ABB95602	AAB69123	AAB82671	AAB69126	AAB69125	AAB69127	AAB69130	AAB69131	ID		OUMHALES
Human PRO9873 prot	Human angiogenesis	Human MLP protein	Human growth regul	Human MI.P protein	Mouse MLP protein	Mouse MLP protein	Rat MLP protein se	Rat MLP protein se	Description		

WPI; 2001-159271/16. N-PSDB; AAF59099.

Yoshimura

444	4210	ω ω 9 0	376	3 G 4	300	υ L	30	2 00	27	26	25	24	23	2 2	20	19	18	17	16	15	14	13	12	11	10
199 199 199	207.5	208.5	215	215 215	215	215	215	215	215	215	215	215	215	215	215	215	215	244.5	262.5	264.5	264.5	462	515	541	541
	35.1 1		9.9	ან. 6.4	36.4	, 0	36.4	, o		٠	٥.	٥.	ο ο	, 0	36.4	36.4	σ,	₩	4.	4	4.		87.1	<u>-</u>	
499 499 99	410 410 1907	138 125	μ	303 303	303	303	303	ω 0 0 0 0	303	303	303	303	30 E	υ 0 0 0 0	303	303	125	130	137	131	131	87	105	128	128
	23 23	22	21 23	24	24.4	24	244	2 2	24	24	24	24	ب د	Jω	N	N	ω	σ	22	22	16	22	22	23	23
931 140 586	AAY70210 ABB82118 ABB82127	583 212	AAY70209 ABB82117	ABU57211 ABU10790	ABU56216	554	ABU67686		ABU72191	ABU72034	ABU71588	ABU71392	ABB95600 ABB84994	ABG95933	AAB87608	AAU29304	ABB82119	AAR69812	ın	נח	981	912	67	98	AAU83627
PRO polype PRO20088 p secreted/t	TANGO 130 TANGO 130	protein se TANGO 130	, ro	PRO polype	Human PRO polypept Human secreted/tra	PRO polype	NOVer numan secret Human secreted/tra	n secreted/tr	n PRO polype	human secre	secreted po	Human PRO19670 pro	angiogenesi	secreted/tr	PRO19670.		3	ibic		man MIA protein	anoma inhibiti	LP prote	n growth regu	human secr	Human PRO protein,

ALIGNMENTS

```
RESULT 1
AAB69131
Itoh Y, N
Tanaka H;
                                                                                                                                                                    MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor.
                                                   (TAKE ) TAKEDA CHEM IND LTD.
                                                                        30-JUN-1999;
                                                                                         29-JUN-2000; 2000WO-JP04278
                                                                                                               11-JAN-2001.
                                                                                                                               WC200102564-A1
                                                                                                                                                  Rattus sp.
                                                                                                                                                                                                                   Rat MLP protein sequence SEQ ID NO:49.
                                                                                                                                                                                                                                       23-APR-2001
                                                                                                                                                                                                                                                                         AAB69131 standard; Protein; 110 AA
                                                                                                                                                                                                                                                          AAB69131;
                              Nishi K, Ogi K, Ohkubo S,
                                                                                                                                                                                                                                      (first entry)
                                                                       99JP-0186718.
                                Mogi S,
                               Noguchi Y,
```

```
RESULT 2
AAB69130
ID AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX ALP;
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW Joir
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW JOIR
KW J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as patthologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                          promoters
                                                                                                                                                                    encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                              (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rat MLP protein sequence SEQ ID NO:47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB69130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB69130 standard; Protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             promoters and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                    2001-159271/16.
                                                                                                                                                                 low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of ters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                         AAF59098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                   Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 107; 111pp; Japanese
                                                                                                                                    and inhibitors for preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                   ogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                                                                                                                                                                                                                                                                      Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 591; DB 22;
Pred. No. 2.6e-68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                      Mogi
                                                                                                                                    or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                   Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                    joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

Claim 6; Page 106; 111pp; Japanese

invention describes novel

ΜĽΡ

proteins

and

their

Sequence

110

exemplification of the

The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used

Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and

joint

Claim 3; Page 98-99; 111pp; Japanese.

```
RESULT 3
AAB69127
묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     នន្តន្តន្តន្តន្ត
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                          N-PSDB; AAF59080
                                                                                                                                                                                                                                                      Itoh Y,
                                                                                                                                                                                                                                                                                                   30-JUN-1999;
                                                                                                                                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                         WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                               cardiant; gene
                                                                                                                                                                                                                                                                                                                                                                                                                                         MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse MLP protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB69127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB69127 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                             (TAKE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                     2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exemplification of the present invention.
                                                                                                                                                                                                                                                                             TAKEDA CHEM IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                      Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                    99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                 therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                      ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein; 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                      Ohkubo s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO:26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 591; DB 22; Pred. No. 3.2e-68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                      Mogi S,
                                                                                                                                                                                                                                                      Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                      Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                      χ.
```

78 60

```
밁
                              Ş
                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                          Matches
                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                            The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB59132 represent sequences used
                                                                                                            Sequence
                                                                                                                                                                                                                                                         Claim 4; Page 93-94; 111pp; Japanese
                                                                                                                                                                                                                                                                                             Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                        diseases
                                                                                                                                                                                                                                                                                                                                                                                                Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-JAN-2001
                                                                                                                                     in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mouse MLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB69125 standard; Protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB69125
                                                                                                                                                                                                                                                                                                                                                                                                                                       (TAKE ) TAKEDA CHEM IND LTD
                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                    2001-159271/16
                                                          106;
     19
                                _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
                                                                                                                                                                                                                                                                                                                                                         AAF59068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97.1%;
Similarity 96.4%;
HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                             Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GEFWAGSVYGDHODEMGIVGYFPSNLVKEQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HGVFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGA
                                                                                                               128
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                           ogi K,
                                                                     97.1%;
                                                                                                                                                                                                                                                                                                                                                                                                             Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ
                                                       ω
••
                                                                  Score 574; DB 22;
Pred. No. 5.1e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 574; DB 22;
Pred. No. 4.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ID NO:12.
                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                           Mogis,
                                                                                  22;
                                                                                                                                                                                                                                                                                                                                                                                                          Noguchi Y,
                                                                               Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 110;
                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                          Yoshimura
                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

RESULT 6
AAB82671
ID AAB
XX

AAB82671 standard; Protein; 128 AA

```
RESULT 5
AAB69126
ID AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX MLP;
KW Join
XW Inhi
XW Inhi
XX INH
XX INH
XX INH
XX INH
XX INH
XX ITAR
PA (TAX
PA (TAX
PA (TAX
PA (TAX
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tana
XX INH
PI Tan
           밁
                                                        S
                                                                                                                   밁
                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                        DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF5909 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 97-98; 111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes novel MLP proteins and their encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         promoters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human MLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB69126 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cardiant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oint disease;
                                                                                                                                                                                                                                                              POCST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MIA; melanoma inhibitory activity; cancer; bone disease; t disease; pathologic angiogenesis; diagnosis; antiinflammatory; iant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-159271/16
                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                low-toxicity secretory cell function-regulatory protein and ed DNA, applicable as drugs, in diagnosis and development of ters and inhibitors for preventing or treating e.g. bone and
     1
                                                                                                                      ب
                                                                                                                                                                           مـر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                           Similarity
                                            GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE
                                                                                                                                                 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
GEFWAGSVYGDGODEMGVVGYFPRNLVKEORVYQEATKEVPTTDIDFFCE
                                                                                                          HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GEFWAGSVYGDHQDEMGIVGYFPSNLVKEQRVYQEATKBIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein sequence
                                                                                                                                                                                                                                                                                                                                              110 AA;
                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein; 110
                                                                                                                                                                                                                                                        91.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ohkubo s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID
                                                                                                                                                                                                                        Score 541; DB 22; Pred. No. 7.8e-62; 7; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NO:24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Noguchi Y,
                                                                                                                                                                                                                                                                                Length 110;
                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yoshimura K;
                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128
                                                                                                                                                                                                                        Gaps
                                                                                                             60
                                                                                                                                                                                                                        0
```

```
CC novel assembled cDNA (see AAH26343) based on Hyseq clone number CC 16372272. The protein has a mol.wt. of 14 kDa unglycosylated. GRLP CC belongs to the same protein family as growth regulatory proteins, CC growth factors, human melanoma derived growth regulatory protein CC precursor (64% similarity and 45% identity over 111 amino acids) CC or melanoma inhibitory activity, cattle carrilage-derived CC retinoic acid sensitive protein (CD-RAP, 44% identity and 64% CC similarity over 126 amino acids) and other retinoic acid-sensitive protein (co-RAP, 44% identity and 64% CC similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention CC and be used in the prophylaxis, treatment (including gene therapy) CC and diagnosis of disorders and diseases caused by or involving, CC artilage development and maintenance, inhibition of melanoma cell corwth and tumours, including neuroectodermal tumours such as CC gliomas. The polypeptides, which include the GRLP mature protein, CC may also have nutritional uses, cytokine and cell proliferation or differentiation activity, tissue growth activity, CC immunosuppressive or immunostimulant activity, haemostatic and CC activity, chemostatic chemokinetic activity, activin/inhibin CC activity, and treatment of leukaemia, nervous system disorders, activity, and irelammation of leukaemia, nervous system disorders,
                                    Query Match
                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence is that of a novel human growth regulatory-like polypeptide (GRLP). The amino acid sequence is predicted from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 10; Page 116-117; 119pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neuroectodermal tumour; glioma; cancer; therapy; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB82671;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-OCT-2001
                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-483233/52.
                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAH26343
                                                                                                         and
and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Boyle BJ,
                                                                       128 AA
 91.5%;
ilarity 89.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               regulatory-like polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= Mature_protein
/note= "separately claimed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal_peptide
Score 541; DB 22;
Pred. No. 9.7e-62;
7; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Arterburn MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 10"
                               Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu
```

Matches

Indels

0,

Gaps

0

맑

79

GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE

```
Ś
                                   밁
                                                                 Ś
                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                Matches
                                                                                                                            Query Match
                                                                                                                                                                                                   The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                         Claim 2; Page 91-92; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                       promoters and inhibitors for preventing
                                                                                                                                                                                                                                                                                                                                                                                      encoded DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAF59065
                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-JUN-1999;
                                                                                                                                                                                     in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MIP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human MLP protein sequence SEQ ID NO:6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB69123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WC200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB69123 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TAKE )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                   low-toxicity secretory cell function-regulatory protein and led DNA, applicable as drugs, in diagnosis and development of sters and inhibitors for preventing or treating e.g. bone and
       61
                                     19
                                                                                                98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                   1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAKEDA CHEM IND LTD.
GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nishi K,
                                  HGI FMDRLASKKLCADDECVYTI SLASAQEDYNAPDCRFINVKKGQQI YVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAFDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HGI FMDRLASKKLCADDECVYTI SLASAQEDYNAPDCRFINVKKGQQI YVYSKLVKENGA
                                                                                                                                                          128 AA;
                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein;
                                                                                                             91.5%;
89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 128
                                                                                                             Score 541; DB 22
Pred. No. 9.7e-62
                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Noguchi Y,
                                                                                                                         Length 128;
                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yoshimura K;
                                                                                             0
                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                       Joint
                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78
```

```
ABB95602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
                                                                                                                                                                                                                                                                                                                                                          18-SEP-2000; 2000US-0665350; 24-0CT-2000; 2000US-0799238; 08-NOV-2000; 2000WG-US30952; 08-NOV-2000; 2000WG-US30953; 01-DEC-2000; 2000WG-US30873; 01-DEC-2000; 2000WG-US30873; 01-DEC-2000; 2000WG-US30873; 01-MAR-2001; 2001WG-0796498; 02-JAN-2001; 2001WG-0796498; 03-FEB-2001; 2001WG-0796498; 03-FEB-2001; 2001WG-079666; 03-MAR-2001; 2001WG-0806520; 01-MAR-2001; 2001WG-0806520; 01-MAR-2001; 2001WG-0806689; 01-MAR-2001; 2001WG-0806689; 01-MAR-2001; 2001WG-0806689; 01-MAR-2001; 2001WG-0806608; 01-MAR-2001; 2001WG-0806608; 01-MAR-2001; 2001WG-08066034; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 2001WG-0866038; 025-MAR-2001; 0201WG-0866038; 025-MAR-2001WG-0866038; 025-MAR-2001WG-0866038; 025-MAR-2001WG-0866038; 025-MAR-2001WG-0866038; 025-MAR-2001WG-0866
                  (GETH)
(BAKE/)
(FERR/)
(GERB/)
(GERR/)
(GODD/)
(GODD/)
(GURN/)
(MARS/)
                                                                                                                                                                                                                                                                                                                         25-MAY-2001;
30-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; angiogenesis; PRO protein; cardiovascularisation; wound; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200208284-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiarteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABB95602 standard; Protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   angiogenesis related protein PRO9873 SEQ
                                                                         FERRARA N.
GERBER H.
GERRITSEN M E.
GODDARD A.
GODDARD P.
GODOWSKI P J.
GURNEY A L.
HILLAN K J.
MARSTERS S A.
PAN J.
                                                                                                                                                                               GENENTECH INC. BAKER K P.
                                                                                                                                                                                                                                          ; 2001WO-US17800.
; 2001WO-US19692.
; 2001WO-US00000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; 2000US-230978P.
; 2000US-000000P.
; 2000US-0664610.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-222695P.
2000US-0643657.
2000WO-US23522.
                                                                                                                                                                                                                                                                                                                       2001WO-US17092
2001US-0870574
                                                                                                                                                                                                                                                                                                      2001WO-US17443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-219556P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001WO-US21735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer;
disorder;
```

23-JUN-2000; 20-JUL-2000; 25-JUL-2000;

; 2000US-213637P. ; 2000US-219556P. ; 2000US-220624P.

20-JUN-2001; 03-JAN-2002

2001WO-US19692.

WO200200690-A2 Homo sapiens.

healing; chromosome

mapping; gene mapping.

```
ABB84996
ID ABB8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baker KP, Fe
Godowski PJ,
                                                                                                                                                                                        vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophlebitis; lumour angiogenesis; breast carcinoma; liver carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rhematoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound because the control of the carcinoma and liver carcinoma and wound
                                                                                                                                                                                                                                                                               Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive;
                                                                                                                                                                                                                                                                                                                  Human PRO9873 protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 11; Fig 360; 567pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           One hundred and eighty seven nucleic acids encoding PRO polynuseful in diagnosis and treatment of cardiovascular (e.g. myvinfarction), endothelial or angiogenic disorders in a mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-171999/22.
N-PSDB; ABL95740.
                                                                                                                                                                                                                                                                                                                                                   16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                               ABB84996 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stephan JF, Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (PAON/)
(STEP/)
(WATA/)
(WILL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          healing. The present sequence is a PRO protein of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOOD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                             φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₩
000
000
000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIFTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HGI FMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQI YVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rrara N, Gerber H, Gerritsen ME, G
Gurney AL, Hillan KJ, Marsters SA,
Watanabe CK, Williams PM, Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91.5%;
89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                               128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 541; DB 23; Pred. No. 9.7e-62; 7; Mismatches 5;
                                                                                                                                                                                                                                                                                                                    SEQ ID NO:360.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Marsters SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ye W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRO polypeptides, (e.g. myocardial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
В
                                         δ
                                                                                                                                                                                         ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to CABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polynucleotides, proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal, ce.g. cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABL8859 to ABL88267 represent primers and probes used in the exemplification of the present invention.
                                                                                               Matches
                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-JUL-2000;
22-JUL-2000;
02-AUG-2000;
17-AUG-2000;
23-AUG-2000;
18-SEP-2000;
18-SEP-2000;
07-SEP-2000;
08-NOV-2000;
08-NOV-2000;
01-DEC-2000;
01-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
22-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DE
                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 11; Fig 360; 565pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-090516/12.
  19
                                                -
                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENENTECH INC.
                        HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYYYSKLYTENGA
HGI FMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ΡJ,
                                                                                                                                                                                         128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001WO-US17092.
2001US-0870574.
2001WO-US17443.
                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001US-0796498.
2001WO-US06520.
2001WO-US06666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001WO-US17800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001US-0854280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001US-0828366.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000WO-US34956.
2001US-0767609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-US30952.
2000WO-US30873.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-220664P.
2000WO-US20710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0709238.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-242922P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0664610.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US23522.
                                                                                                                91.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gerber H, Gerrit
L, Hillan KJ, Ma
CK, Williams PM,
                                                                                          Score 541; DB
Pred. No. 9.7e
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerritsen ME, Go
KJ, Marsters SA,
ms PM, Wood WI,
                                                                                                                DB 23;
.7e-62;
                                                                                          ن.
د.
                                                                                                                                   Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard A;
                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pan J,
                                                                                       0
                                                                                     Gaps
```

```
RESULT 10
AAU83627
ID AAU83
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                 26-JUL-2000;
28-JUL-2000;
23-AUG-2000;
24-AUG-2000;
10-NGV-2000;
10-NGV-2000;
28-NGV-2000;
01-DEC-2000;
                                                                                                      One hundred and twenty two nucleic acids encoding PRO polypeptides, useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour -
                                                                                                                                                                                                                                                                                                                                                                                25-JUL-2000; 2000US-220585P.
25-JUL-2000; 2000US-220605P.
25-JUL-2000; 2000US-220624P.
25-JUL-2000; 2000US-220638P.
                                                                                                                                                       N-PSDB; ABK33571.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; rectal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-MAY-2002
                                                                                                                                                                                            Baker
                                                                                                                                                                                                                                                                                                                                                                                                                                  20-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2001; 2001WO-US21066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU83627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU83627 standard; Protein; 128 AA
                                                                                                                                                                                                                 (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumour necrosis factor-alpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRO
                                                                                                                                                                                            ਚ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                    'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GEFWAGSVYGDGODEMGVVGYFPRNLVKEORVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein,
                                                                                                                                                                                            Desnoyers
                                                                                                                                                                                                                                                                                 2000WO-US30873.
2000US-253646P.
2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                   2001US-0854280
2001WO-US17092
                                                                                                                                                                                                                                                                                                                        2000WO-US23522.
2000WO-US23328.
                                                                                                                                                                                                                                                     2000WO-US34956
2001WO-US06520
                                                                                                                                                                                                                                                                                                                                           2000US-220893P.
2000WO-US20710.
                                                                                                                                                                                                                                                                                                                                                               2000US-220664P.
2000US-220666P.
                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-219556P
                                                                                                                                                                                                                                                                         2000US-0747259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seq
                                                                                                                                                                                  Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ID No
                                                                                                                                                                                Gerritsen ME, Goddard
Smith V, Stephan JF,
                                                                                                                                                                                            Goddard
                                                                                                                                                                                  Ŗ
                                                                                                                                                                                            PJ:
```

The invention relates to one hundred and twenty two nucleic acids encoding PRO polypeptides. The sequences of the 122 PRO polypeptides, encode hunan secreted proteins. The PRO nucleic acids, polypeptides, agonists and antagonists are useful for treating a PRO related disorder. The PRO polypeptides are useful for diagnosing tumours, especially lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour. The PRO polypeptides are useful for stimulating the proliferation of, or gene expression, in pericyte cells, for stimulating

Claim 11; Figure 72; 359pp; English.

```
AAU09871
ID AAU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ន្តន្តន្តន្តន្តន្តន្ត្
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
The invention relates to an isolated novel secreted polypeptide (I) and polymicleotide (II). (I) and (II) are useful for treating cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, neurological and psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, cargatrointestinal diseases. These may also be used to treat diseases, abnormalities and disorders caused by abnormal
                                                                                                                                                                    New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer
                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotrogic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease; psychiatric disease; cardiovascular disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the proliferation or differentiation of chondrocyte cells, for stimulating the release of tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal fibroblast cells. The PRO polypeptide may also be used as molecular weight markers and for tissue typing. The PRO nucleic acids have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. AAU83592-AAU83713 represent human PRO protein sequences of the invention.
                                                                                                                                                                                                                                                                                                        Agarwal P,
                                                                                                                                                                                                                                                                                                                                             (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                 13-APR-2000; 2000US-196603P.
24-APR-2000; 2000US-199417P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU09871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              respiratory disease; renal; gastrointestinal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU09871 standard; Protein;
                                                                                                                                                                                                                                                                         2002-061975/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                      AAS17583
                                                                                                                                                                                                                                                                                                                                             SMITHKLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               128 AA;
                                                                                                                                                                                                                                                                                                          Murdoch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                           73-74; 92pp; English.
                                                                                                                                                                                                                                                                                                                                             BEECHAM
BEECHAM
                                                                                                                                                                                                                                                                                                      PR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91.5%;
89.1%;
                                                                                                                                                                                                                                                                                                          Rizvi SK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 541; DB 23;
Pred. No. 9.7e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                        Smith RF,
                                                                                                                                                                                                                                                                                                      Xiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
RESULT 12
AAB82672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                   Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous systman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polynuclectides may be used as diagnostic reagents, in chromosome localisation studies, and in tissue expression studies. The present sequence represents the
                                                                                                                                                                                                                                                              WPI; 2001-483233/52.
                                                                                                                                                                                                                                                                                                            Mize NK,
                                                                                                                                                                                                                                                                                                                                       (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                    02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                  25-JAN-2000; 2000US-0491404
                                                                                                                                                                                                                                                                                                                                                                                                                                               02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human growth regulatory-like polypeptide (mature protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB82672 standard; Protein; 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                  N-PSDB; AAH26343.
                                                                                                                                                                                                                                                                                                                                                                                                               25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   neuroectodermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid sequence of novel human secreted protein #12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression, production, function and/or metabolism of the genes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                                                                                                                                          Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tumour; glioma; cancer; therapy; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91.5%;
                                                                                                                                                                                                                                                                                                            Ford
                                                                                                                                                                                                                                                                                                          JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 541; DB 23;
Pred. No. 9.7e-62;
                                                                                                                                                                                                                                                                                                          Arterburn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

The present sequence is that of a novel human growth regulatory-like polypeptide (GRLP) mature protein. The sequence is predicted from a novel assembled cDNA (see AAHS6443) based on Hyseq clone number 16372272. The protein has a mol.wt. of 14 kDa unglycosylated. GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive protein (CD-RAP, 44% identity and 64%

Claim 10; Page 117; 119pp; English.

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                growth and tumours, including neuroectodermal tumours such as gliomas. The polypeptides, which include the GRLP mature protein, may also have nutritional uses, cytokine and cell proliferation or differentiation activity, stem cell growth factor activity, haematopoiesis regulating activity, tissue growth activity, immunosuppressive or immunostimulant activity, haemostatic and thrombolytic activity, use in cancer diagnosis and therapy, drug screening, receptor/ligand activity, antiinflammatory activity, and treatment of leukaemia, nervous system disorders, arthritis and inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   can be used in the prophylaxis, treatment (including gene therapy) and diagnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell
                                                                                           Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  similarity over 126 amino acids) and other retinoic acid-sensitive proteins. GRLP polypeptides and polynucleotides of the invention can be used in the prophylaxis, treatment (including gene therapy)
                                                                                                                                                                 WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB69129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seguence
                                                Example 9; Page 103; 111pp; Japanese
                                                                                                                                                                                                                   Itoh Y,
                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                 30-JUN-1999;
                                                                                                                                                                                                                                                                                                                 29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                  11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                   WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                              joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MLP; MIA; melanoma inhibitory activity; cancer; bone disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rat MLP protein sequence SEQ ID NO:39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB69129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                               Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGAGEFWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                 99JP-0186718
                                                                                                                                                                                                               ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87.1%;
                                                                                                                                                                                                                 Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ه</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 515; DB 22;
Pred. No. 1.7e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                               Ś
                                                                                                                                                                                                               Mogi S,
                                                                                                                                                                                                               Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                               Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                              joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT 14
AAR69811
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ត្តត្តត្តត្ត¥&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                     (it inhibits IL-2 or phycohaemagglutinin induced proliferation of peripheral blood lymphocytes). Antibodies raised against the protein can be used to detect cell producing the protein and also for protein purification. Probes derived from DNA encoding the protein (AAQ84051) can be used to detect sequences encoding the protein or related proteins. The protein may be expressed as a fusion protein (conjugated with dihydrofolate reductase (DHFR)).
                                                                                                                                     This protein has melanoma-inhibiting activity and can be used to treat cancer (melanoma, gliobiastoma, neurobiastoma, small cell lung cancer, neuroectodermal tumours) or as an immunosuppressant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                       New melanoma inhibiting protein and related nucleic acid vectors, transformed cells, antibodies etc., useful for t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                     Claim 1; Page 54; 85pp; German.
                                                                                                                                                                                                                                                                                                      N-PSDB; AAQ84050,
                                                                                                                                                                                                                                                                                                                                                      Bogdahn U,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W09503328-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Melanoma; inhibition; cancer; melanoma; glioblastoma; neuroblastoma; small cell lung cancer; neuroectodermal tumours; immunosuppressant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR69811 standard; Protein;
                                                                                                                                                                                                                                                                                                                       WPI; 1995-075191/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-FEB-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              phytohaemagglutinin; lymphocyte; interleukin 2; IL-2; detection;
probe; fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Melanoma inhibiting protein (human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-OCT-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR69811;
                                                                                                                                                                                                                                       tumours and as immunosuppressant e.g. by gene therapy
                                                                                                                                                                                                                                                                                                                                                                                      (BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSVYGDHQDEMGIVGYFPSNLVREQRV 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSVYGDHQDEMGIVGYFPSNLVREQRV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87 AA;
                                                                                                                                                                                                                                                                                                                                                      Buettner R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                    93DE-4324247.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   94WO-EP02369
                                                                                                                                                                                                                                                                                                        AAQ84051.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78.2%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                      Kaluza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 462; DB 22;
Pred. No. 9.7e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                      for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

on 25-MAR-2003

ťo

correct PN field.)

```
AAG65614
ID AAG
                                           The invention relates to the use of melanoma inhibiting activity (MIA) CC protein and/or its fragments that have anti-inflammatory effects and CC induce systemic immune tolerance or specific T-cell tolerance to MIA CC antigen, for manufacturing a preparation against inflammatory diseases CC and for induction of systemic immune tolerance or specific T-cell CC tolerance in patients suffering from or susceptible to inflammatory CC diseases. A fragment of MIA is useful as a therapeutic substance and is CC useful for manufacture of pharmaceutical preparations against CC inflammatory diseases such as an immune-cell mediated cartilage CC diseases. Paperations against CC diseases like Graves, specifically rheumatoid arthritis, autoimmune CC diseases like Graves, disease, juvenile arthritis, primary CC glomerulonephritis, polyarthritis, osteoarthritis, Sjogren's syndrome, CC myasthenia gravis, Addison's disease, primary biliary sclerosis, CC uveitis, systemic lupus erythematosis, inflammatory bowel disease, CC multiple sclerosis or diabetes. The MIA polypeptides have specific confiction of immunosymptesive account of the immune system intact as compared to the non-specific suppressive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIA; melanoma inhibiting activity protein; antiinflammatory; human; antiarthritic; antirheumatic; antithyroid; osteopathic; nephrotropic; immunosuppressive; ophthalmological; dermatological; antidiabetic; neuroprotective; immune tolerance; T-cell tolerance.
               human MIA protein
                               effect of immunosuppressive drugs. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                 Example 4; Page 34; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                    specifically rheumatoid arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use of melanoma inhibiting activity protein or its derivatives as immune modulatory agents for the treatment of inflammatory diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAH47783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-MAR-2001; 2001WO-EP02991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nelissen RLH, Verheijden GFM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-2000; 2000EP-0201063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-SEP-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200170253-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human MIA protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAG65614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAG65614 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-611446/70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84 WGGSVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64 WAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27 MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 264.5; DB 10,
Pred. No. 6.6e-26;
"'~matches 30; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ۍ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
--
```

```
Ş
                                                                        S
                          Matches
                                                  Query Match
                                                                         Sequence
                                     Local Similarity
                          50;
5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF 63
                                                                         131 AA;
                         Conservative
                                    44.8%;
                       23; Mismatches
                                   Score 264.5; DB 2
Pred. No. 6.6e-26;
                                               DB 22;
                         30; Indels
                                              Length 131;
                       5
```

Gaps

w Te

밁 Ś 84 WGGSVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131 64 WAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110

27 MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF 83

밁

Search completed: December 29, Job time : 21.5686 secs 2003, 16:09:04

```
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
                                                                                                                                                                                                                                    Published Applications AA:*

1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-49
591
            BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      December 29, 2003, 16:09:08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            724715 segs, 199017464 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
/cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Search time 15.098 Seconds (without alignments)
1449.984 Million cell updates/sec
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

S	
q	
3	
3	
⋗	
b	

15	14	1.	12) <u> </u>	10	. 19	00	7	o,	ហ	4.	Ĺ	N	, <u>-</u>	Result No.
541	541	541	541	1 4 1	541	541	541	541	541	541	541	541	541	541	Score
91.5	91.5	91.5	91.5	91.5	91.5									91.5	Query Match
128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	Length
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	Ba
US-10-219-531-72	US-10-219-530-72	US-10-219-526-72	US-10-219-525-72	US-10-219-483-72	US-10-219-480-72	US-10-219-475-72	US-10-219-073-72	US-10-219-069-72	US-10-219-068-72	US-10-219-067-72	US-10-219-066-72	US-10-219-063-72	US-10-218-765-72	US-10-216-163-72	ID
	72			72,	72,	72,	72,	72,	72,	72	72,	72,	72,	•	Description

45	44	43	42	41	40	39	38	37	36	ω U	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541	541
91.5	-:				:		:	:-	:	:-	:	:	ŗ	۳	:-		:	۳	۳	ŗ						۳			_
128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
15	ים נו		15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	<u>,,</u>	۲ ۲	12	12	12	12	12	12
10-219	-10-219-468-7	-10-218-956-7	-10-216-165-7	-10-232-233-7	-10-232-231-7	-10-230-260-7	-10-219-481-7	-10-219-479-7	-10-219-466-7	-10-219-464-7	-10-219-075-7	-10-219-003-7	-10-230-434-7	-10-219-076-7	-10-227-883-7	-10-227-873-7	-10-218-849-7	-10-216-159A-	-10-230-414-7	-10-218-63	-10-230-338-7	-10-230-163-7	-10-227-884-7	-10-223-082-3	0-232-228-7	-10-230-437-7	-10-223-081-3	-10-219-533-7	9
Sequence 72, Appl	equence 72,	equence 72	emience 72	equence 72,	equence 72,	equence 72,	equence 72,	equence 72,	equence 72,	equence 72,	equence 72, App	equence 72,	equence 72,	equence 72, App	equence 72, App	equence 72, App	equence 72,	equence 72, App	equence 72, App	equence 72, App	quence 72, App	equence 72, App	equence 72, App	equence 360, Ap	equence 72, App	equence 72, App	equence 360, Ap	ice 72,	equence 72, App

ALIGNMENTS

US-10-216-163-72

```
Sequence 72, Application US/10216163

Publication No. US20030149239A1

GENERAL INFORMATION:

APPLICANT: Baker, Kevin P.

APPLICANT: Baker, Kevin P.

APPLICANT: Geodard, Audrey

APPLICANT: Goodard, Audrey

APPLICANT: Goodard, Paul J.

APPLICANT: Goodard, Paul J.

APPLICANT: Goodard, Paul J.

APPLICANT: Gorinaldi, J. Christopher

APPLICANT: Santh, Victoria

APPLICANT: Santh, Victoria

APPLICANT: Stephan, Jean-Philippe F.

APPLICANT: Wood, William I.

ITITLE OF INVENTION: ACIDS ENCODING THE SAME

TITLE OF INVENTION: ACIDS ENCODING THE SAME

TITLE OF INVENTION: ACIDS ENCODING THE SAME

CURRENT FILING DATE: 2002-08-09

PRIOR APPLICATION NUMBER: 00/059113

PRIOR APPLICATION NUMBER: 60/06287

PRIOR APPLICATION NUMBER: 60/06287

PRIOR APPLICATION NUMBER: 60/06349

PRIOR FILING DATE: 1997-10-21

PRIOR APPLICATION NUMBER: 60/06349

PRIOR APPLICATION NUMBER: 60/063649

PRIOR FILING DATE: 1997-10-28

PRIOR APPLICATION NUMBER: 60/063649

PRIOR APPLICATION NUMBER: 60/069873

PRIOR APPLICATION NUMBER: 60/069873

PRIOR APPLICATION NUMBER: 1998-03-25

PRIOR APPLICATION NUMBER: 60/079294

PRIOR FILING DATE: 1998-03-25

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079294

PRIOR APPLICATION NUMBER: 60/079656
```

```
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddawski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
APPLICANT: Swephan, Jean-Philippe F.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
ACIDS ENCODING THE SAWE
FILE REFERENCE: P3530P1C19
CURRENT FILING DATE: 2002-08-12
PRICE REPERENCE: P3530P1C19
CURRENT FILING DATE: 2002-08-12
PRICE APPLICATION NUMBER: U5/10/218,765
CURRENT FILING DATE: 1997-09-17
PRICE APPLICATION NUMBER: 60/059113
PRICE APPLICATION NUMBER: 60/062287
PRICE APPLICATION NUMBER: 60/062287
PRICE APPLICATION NUMBER: 60/063549
PRICE APPLICATION NUMBER: 60/063549
PRICE APPLICATION NUMBER: 60/064103
PRICE FILING DATE: 1997-10-28
PRICE FILING DATE: 1997-10-31
PRICE FILING DATE: 1997-10-31
PRICE FILING DATE: 1997-10-31
PRICE FILING DATE: 1997-12-17
PRICE APPLICATION NUMBER: 60/063873
PRICE FILING DATE: 1997-12-17
PRICE APPLICATION NUMBER: 60/0798910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; PRIOR FILING DATE: 1998-03-26
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR FILING DATE: 1998-03-27
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 246
; SEQ ID NO 72
; SEQ ID NO 72
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-216-163-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
US-10-218-765-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/081819
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/081819
PRIOR APPLICATION NUMBER: 60/081955
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/082804
PRIOR APPLICATION NUMBER: 60/082804
PRIOR APPLICATION NUMBER: 60/082804
PRIOR APPLICATION NUMBER: 60/084441
PRIOR APPLICATION NUMBER: 60/084441
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/084441
PRIOR FILING DATE: 1998-05-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 72, Application US/10218765 Publication No. US20030187201A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker,
                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   n 91.5%;
Similarity 89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HGI FMDRLASKKLCADDECVYTI SLASAQEDYNAPDCR FINVKKGQQI YVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 541; DB 12;
Pred. No. 1.7e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .0
                                                                                                                                                                            PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                    PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
```

DR FILING DATE: 1998-09-15
PR APPLICATION NUMBER: 60/100627
DR FILING DATE: 1998-09-16
DR APPLICATION NUMBER: 60/100848
DR FILING DATE: 1998-09-18
DR APPLICATION NUMBER: 60/100919 APPLICATION NUMBER: 60/099803 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/099811 FILING DATE: 1998-09-10 APPLICATION NUMBER: 60/099812 APPLICATION NUMBER: 60/101922 FILING DATE: 1998-09-24 APPLICATION NUMBER: 60/106178 APPLICATION NUMBER: 60/101786 FILING DATE: 1998-09-25 APPLICATION NUMBER: 60/101916 FILING DATE: 1998-09-24 APPLICATION NUMBER: 60/101738 FILING DATE: 1998-09-24 APPLICATION NUMBER: 60/101741 FILING DATE: 1998-09-17 APPLICATION NUMBER: 60/101477 APPLICATION NUMBER: 60/099598 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: 60/089538 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/085323 FILING DATE: 1998-05-13 FILING DATE: 1998-09-24 FILING DATE: 1998-09-15
APPLICATION NUMBER: 60/100390 APPLICATION NUMBER: 60/100038 FILING DATE: 1998-09-11 APPLICATION NUMBER: 60/099816 FILING DATE: 1998-09-1 FILING DATE: 1998-09-APPLICATION NUMBER: 60/099596 FILING DATE: 1998-08-3 FILING DATE: 1998-0: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-08-04 APPLICATION NUMBER: 60/095318 APPLICATION NUMBER: 60/089905 FILING DATE: 1998-06-18 APPLICATION NUMBER: 60/089532 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/086392 FILING DATE: 1998-05-22 FILING DATE: 1998-09-APPLICATION NUMBER: 60/100385 FILING DATE: 1998-09-10 FILING DATE: APPLICATION NUMBER: 60/095302 FILING DATE: 1998-07-07 FILING DATE: 1998-06-29 APPLICATION NUMBER: 60/090695 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/090557 FILING DATE: 1998-06-APPLICATION NUMBER: 60/090472 APPLICATION NUMBER: 60/085579 APPLICATION NUMBER: 60/091982 APPLICATION NUMBER: 60/090691 FILING DATE: 1998-05-1998-08-10 1998-08-04 1998-08-26 1998-08-17 1998-08-60/097986 60/096791 60/098544 60/096146 60/095916

```
PRIOR APPLICATION NUMBER: 60/134287
PRIOR FILING DATE: 1999-05-14
PRIOR APPLICATION NUMBER: 60/140650
PRIOR FILING DATE: 1999-06-22
PRIOR APPLICATION NUMBER: 60/140723
PRIOR FILING DATE: 1999-06-22
PRIOR APPLICATION NUMBER: 60/141037
PRIOR APPLICATION NUMBER: 60/141037
PRIOR FILING DATE: 1999-06-23
PRIOR FILING DATE: 1999-06-23
                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
R FILING DATE:
R APPLICATION N
R FILING DATE:
                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/141037
FILING DATE: 1999-06-23
APPLICATION NUMBER: 60/144758
                                                 FILING DATE: 1999-08-17
APPLICATION NUMBER: 60/151733
                                                                                    FILING DATE: 1999-01
APPLICATION NUMBER:
                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                       APPLICATION NUMBER: 60/146963
                                                                                                                                                                          FILING DATE: 1999-07-28
                                                                                                                                                                                          APPLICATION NUMBER: 60/146222
                                                                                                                                                                                                             APPLICATION NUMBER: 60/145698 FILING DATE: 1999-07-26
                                                                                                                                                                                                                                               FILING DATE: 1999-07-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/115558
FILING DATE: 1999-01-12
APPLICATION NUMBER: 60/115565
FILING DATE: 1999-01-12
                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1999-0-APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1999-04-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/123618 FILING DATE: 1999-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/115733
FILING DATE: 1999-01-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-12-15
APPLICATION NUMBER: 60/113296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-11-18
APPLICATION NUMBER: 60/112422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/108801
FILING DATE: 1998-11-17
APPLICATION NUMBER: 60/108849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-11-03
APPLICATION NUMBER: 60/108787
FILING DATE: 1998-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/131445
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/131270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1999-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1999-04-21
APPLICATION NUMBER: 60/131022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/130232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/126773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/125775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1999-02-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/119549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/113605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/106248 FILING DATE: 1998-10-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1999-03-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-12-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/113621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/106905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/106464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILING DATE: 1998-10-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LING DATE: 1999-03-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LING DATE: 1999-03-1
              : 1999-08-31
NUMBER: 60/164418
                                                                                                      1999-08-17
                                                                                                                                       1999-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                             1999-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1999-04-27
                                                                                    60/149638
                                                                                                                        60/149320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/131291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/127887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/125259
```

```
APPLICANT: WATANABE, COLIN L.

APPLICANT: WOOD, WILLIAM I.

TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C24

CCURRENT APPLICATION NUMBER: U8/10/219,063

CCURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06349
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
                                                                                            ; ORGANISM: Homo US-10-219-063-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
US-10-219-063-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/166361
PRIOR FILING DATE: 1999-11-16
PRIOR APPLICATION NUMBER: 60/169445
PRIOR FILING DATE: 1999-12-07
PRIOR APPLICATION NUMBER: 60/169495
PRIOR FILING DATE: 1999-12-07
PRIOR APPLICATION NUMBER: 60/169835
                                                Query Match
                                                                                                                                                                                   SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 72, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                     Remaining Prior F
NUMBER OF SEQ ID
                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                     LENGTH: 128
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                       h 91.5%;
Similarity 89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10219063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stephan, Jean-Philippe F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                Sapien
                                                                                                                                                                                                     Application data removed - See File Wrapper or PALM D NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91.5%;
Score 541; DB 12;
Pred. No. 1.7e-59;
7; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 541; DB 12;
Pred. No. 1.7e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Matches

98;

Conservative

Length 128;

Indels

0;

Gaps

0

Best Local

```
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PLC27
CURRENT APPLICATION UNMBER: US/10/219,066
CURRENT FILING DATE: 2002-08-13
PRIOR FILING DATE: 2002-08-13
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/06254
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR TILING DATE: 1997-10-31
PRIOR TILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/06303
PRIOR APPLICATION NUMBER: 60/069073
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                               B
                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                              US-10-219-066-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-066-72
                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 72
                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, I
APPLICANT: Desnoy.
APPLICANT: Gerrit
APPLICANT: Goddar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH: 128
                                                                                                                                                                                                                                                     Local
                                                                             61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                            98;
                                                                                                                             19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GAFWAGSVYGDHODEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                        1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                91.5%;
Similarity 89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godowski, Paul J.
Grinaldi, J. Christopher
Gurney, Austin I.
Smith, Victoria
Stephan, Jean-Philippe F.
                              GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/10219066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard,
                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US20030187203A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , Audrey
                                                                                                                                                                                                                       Score 541; DB 12; Length 128; Pred. No. 1.7e-59; 7; Mismatches 5; Indels
                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                         US-10-219-068-72
                                                                                                                                                                                                                     RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo Sapien US-10-219-067-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-067-72
                                                                                                                   Sequence 72, Application US/10219068 Publication No. US20030187205A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 72, Application US/10219067
Publication No. US20030187204A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Goddowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09 PRIOR APPLICATION NUMBER: 60/059113 PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gurney, Austin
Smith, Victori
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Austin L.
```

```
Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/219,4067
CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C51
                                    61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQBATKEIFTTDIDFFCE 110
                                                                                                                              19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                     1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                     91.5%; Score 541; DB 12; Length 128;
89.1%; Pred. No. 1.7e-59;
tive 7; Mismatches 5; Indels
                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                60
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-069-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-068-72
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 72, Application US/10219069 Publication No. US20030187206A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 72
LENGTH: 128
                                                                                   APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C40
                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P9530PLC31 CURRENT APPLICATION NUMBER: US/10/219,068

CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/069873 PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/079656 FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GEFWAGSVYGDGODEMGVVGYFPRNLVKEORVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                       Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                            Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 541; DB 12;
Pred. No. 1.7e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 o
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530F1CS:
CURRENT APPLICATION NUMBER: US/10/219,073
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 2002-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR PILING DATE: 1997-10-28
PRIOR PILING DATE: 1997-10-28
PRIOR PILING DATE: 1997-10-28
PRIOR PILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-073-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo Sapien US-10-219-069-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Baker, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 72, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 72
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 12
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/062287
FILING DATE: 1997-10-17
APPLICATION NUMBER: 60/063549
FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/059113
FILING DATE: 1997-09-17
APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/069873 FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GAFWAGSVYGDHODEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79 GEFWAGSVYGDGÓDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91.5%;
Similarity 89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                Stephan, Jean-Philippe F Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/10219073
vo. US20030187207A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 541; DB 12;
Pred. No. 1.7e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo Sapien US-10-219-073-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-219-475-72
                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR PELING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062387
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gertitsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 72, Application US/102 Publication No. US20030187208A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data ren
NUMBER OF SEQ ID NOS: 246
1EQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Wood, William I.

TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES.

TITLE OF INVENTION: ACLDS ENCODING THE SAME
FILE REFERENCE: p5530PLC49

CURRENT APPLICATION NUMBER: US/10/219,475

CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
                                                                                                                              PRIOR APPLICATION NUMBER: 60/079656 PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/079294 PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 128
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10219475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F. Watanabe, Colin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                       Application data removed - See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91.5%;
89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 541;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No. 1.7e-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
APPLICANT: Suscin, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
TITLE OF INVENTION: SCRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C38
CURRENT APPLICATION NUMBER: US/10/219,480
CURRENT EILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/05287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Hon
US-10-219-475-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-219-480-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                                                                                                                                                  US-10-219-480-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Baker, K
APPLICANT: Desnoye
                                                                                                                                                                                                              SEQ ID NO 72
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 72, Application US/10219480 Publication No. US20030187209A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
                                                                 Matches
                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                       Remaining Prior Application data removed - See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-10-31 PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                        ORGANISM:
                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                        Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91.5%;
                                                                                91.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 541; DB 12;
Pred. No. 1.7e-59;
7; Mismatches 5;
                                                        Score 541; DB 12; Pred. No. 1.7e-59; 7; Mismatches 5;
                                                              <u>ω</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                              0
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
```

밁

19

HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA

맑

```
RESULT 12
US-10-219-525-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-219-483-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-219-483-72
              Sequence 72, Application US/10219525 Publication No. US20030187211A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 72, Application US/10219483 Publication No. US20030187210A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: SECRIFED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C43
CURRENT APPLICATION NUMBER: US/10/219,483
CURRENT FILING DATE: 2002-08-13
RAIOR APPLICATION NUMBER: 10/119,480
RRIOR FILING DATE: 2002-04-09
PRIOR PILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
RRIOR APPLICATION NUMBER: 60/059113
RRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/069873 PRIOR FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/079656
                                                                                                                                                                         79 GEFWAGSVYGDGODEMGVVGYFPRNLVKEORVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                    61 GAFWAGSVYGDHODEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                  98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GAFWAGSVYGDHQDEMGIVGYFPSNLVRBQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                            1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard
                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Audrey
                                                                                                                                                                                                                                                                                                                                                                                  91.5%; Score 541; DB 12;
89.1%; Pred. No. 1.7e-59;
                                                                                                                                                                                                                                                                                                                                                             7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                        DB 12; Length 128;
                                                                                                                                                                                                                                                                                                                                                           .
                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                              US-10-219-526-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-219-525-72
                                                                                                                                                                                                                                                      Sequence 72, Applica Publication No. US20 GENERAL INFORMATION:
                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 72
                                                                                             APPLICANT:
                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09 PRIOR APPLICATION NUMBER: 60/059113 PRIOR FILING DATE: 1997-09-17 PRIOR APPLICATION NUMBER: 60/062287
                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: P3530P1C29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/078910 PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC DE INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98;
                                                                                                                                                                                                                                                                                                                                                                                                                      79 GEFWAGSVYGDGÓDEMGVVGYFPRNLVKEÓRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HGMEMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                              Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                     Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                      Application US/10219526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin I
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                US20030187212A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91.5%; Score 541; DB 12; Length 128; 89.1%; Pred. No. 1.7e-59; tive 7; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

밁 Ş 뮍 Ş

```
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C41
CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/059113
PRIOR PILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06249
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/064103
PRIOR PILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-10-219-530-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-219-526-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 72, Application US/10219530 Publication No. US20030187213A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
  PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530PIC54 CURRENT APPLICATION NUMBER: US/10/219,530 CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker, APPLICANT: Desno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 128
TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19 HGIFMDRLASKKLCADDECVYTISLASAQEDYNAPDCRFINVKKGQQIYVYSKLVKENGA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 91.5%; Score 541; DB 12; Length 128; Similarity 89.1%; Pred. No. 1.7e-59; 98; Conservative 7; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                     Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                   Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin I
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                   Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-219-531-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-219-530-72
                                                                   PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-0-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 72, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/079728

PRIOR FILING DATE: 1998-03-27

Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/219,531
CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/063549 PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/079294 PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 128
TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / Match 91.5%;
Local Similarity 89.1%;
                                             APPLICATION NUMBER:
APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/079656 FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GAFWAGSVYGDHQDEMGIVGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HGMFMDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GEFWAGSVYGDGQDEMGVVGYFPRNLVKEQRVYQEATKEVPTTDIDFFCE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HGI FMDRLASKKL CADDECVYTISLASAQEDYNAPDCRFINVKKGQQI YVYSKL VKENGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10219531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US20030187214A1
                          1998-03-25
                                                   60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 541; DB 12;
Pred. No. 1.7e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74
69.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84.5
82.5
76.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-49
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December 29, 2003, 16:03:18; Search time 8.0112 Seconds (without alignments) 580.961 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    328717 seqs, 42310858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12.5
12.5
12.5
12.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Issued_Patents_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cgn2_6/ptcdata/2/iaa/5A_COMB.pep:*
/cgn2_6/ptcdata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptcdata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptcdata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptcdata/2/iaa/BCTUS_COMB.pep:*
/cgn2_6/ptcdata/2/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                     US-08-578-649-2
US-07-646-5378-2
US-07-646-5378-2
US-09-346-510B-21
US-09-346-510B-21
US-09-346-510B-24
US-08-164-839-4
US-08-164-839-6
US-08-630-915A-210
US-08-630-915A-210
US-08-630-915A-31
US-08-164-839-31
US-08-164-839-31
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
US-08-164-839-79
U
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 198, Appli
Sequence 198, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 31, Appli
Sequence 70, Appli
Sequence 72, Appli
Sequence 72, Appli
Sequence 72, Appli
Sequence 73, Appli
Sequence 74, Appli
Sequence 75, Appli
Sequence 76, Appli
Sequence 77, Appli
Sequence 78, Appli
Sequence 78, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                 Ś
```

4. U	44	43	42	41	40	9	38	37	36	35	34	ω ω	32	31	30	29	28
65	65	65	65	66	66	66	66	66	66	66	66	გ	66	66	66	66	66
11.0	11.0	11.0	11.0		11.2			11.2	11.2								
1719	788	57	57	397	397	397	397	397	397	397	397	370	370	370	370	280	280
N	4.	4.	4.	٢	ᆫ	۳	-	_	-	<u> </u>	μ.	H	ш	 -	μ	4.	4.
US-08-459-568-4	US-08-630-915A-30	US-08-630-915A-136	US-08-630-915A-125	US-08-459-871-4	US-08-459-871-2	US-08-460-327-4	US-08-460-327-2	US-08-459-967-4	US-08-459-967-2	US-08-434-255-4	US-08-434-255-2	US-08-459-871-6	US-08-460-327-6	US-08-459-967-6	US-08-434-255-6	US-09-417-359A-2	US-09-019-532-2
Sequence 4, Appli	Sequence 30, Appl	•	Sequence 125, App	4.	(0	4	e 2,	4		4.	•	ю б,	φ,	•	σ,		Sequence 2, Appli

ALIGNMENT:

```
Sequence 2, Application US/08578649
Patent No. 5770366
GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
ITITLE OF INVENTION: MELANOMA-INHI
NUMBER OF SEQUENCES: 24
                                                                                  ; MOLECULE TYPE: US-08-578-649-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
US-08-578-649-2
                                            Query Match
                                                                                                                                                                          TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/578,649
FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REGISTRATION NUMBER: 31,575
                                                                                                                                                                                                                                    REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: PC-D
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: N
                                                                                                                LENGTH: 131 amino acids
TYPE: amino acid
TOPOLOGY: linear
                        Local
                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 805 Th
CITY: New York
    50; Conservative
                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PS/2
44.8%; Score 264.5; DB 1;
46.3%; Pred. No. 9.6e-27;
tive 23; Mismatches 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PC-DCS
                                    Length 131;
ۍ
۲:
Gaps
```

ADDRESSEE:

Bristol-Myers Squibb Company

```
US-07-646-537B-2
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-578-649-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
US-08-578-649-5
                                                                                                    Sequence 2, Application US/07646537B Patent No. 5348864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 5, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                            GENERAL INFORMATION: APPLICANT: Barbac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKST NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 686-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
  CORRESPONDENCE ADDRESS
                    TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 WGGSVQGDYYGDLAARLGYFPSSIVREDQTLKPGKVDVKTDKWDFYCQ 131
                                                                                                                                                                                                                                                               64 WAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPTIDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64 WAGSVYGDHQDEMGI-VGYFPSNLVREQRVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27
                                                                                                                                                                                                                                                                                                       26 MPKLADWKLCADEECSHPISMAVALQDYVAPDCRFLTIYRGQVVYVFSKL---KGRGRLF 82
                                                                                                                                                                                                                                                                                                                                                                                       50;
                                                                                                                                                                                                                                                                                                                                           5 MDKLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAG-AF 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New York
                                                                                                                                                                                                                        WGGSVQGGYYGDLAARLGYFPSSIVREDLNSKPGKIDMKTDQWDFYCQ 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MPKLADRKLCADQECSHPISMAVALQDYMAPDCRFLTIHRGQVVYVFSKL---KGRGRLF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                   41.4%; Score 244.5; DB 1; Length ilarity 46.3%; Pred. No. 3.9e-24; Conservative 20; Mismatches 33; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                          Barbacid, Mariano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Felfe & Lynch
                                         Vav Proto-Oncogene Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                           Length 130;
                                                                                                                                                                                                                                                                                                                                                                                   5;
                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                   w
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
```

```
; OTHER INFORMATION: amino acid sequence of Vav SH3 domain US-09-346-510B-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-346-510B-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-07-646-537B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                Matches
                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                           SEQ ID NO 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 21, Application US/09346510B Patent No. 6281014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 15.8%; Score 93.5; DB 1; Length 844; Best Local Similarity 32.9%; Pred. No. 0.0029; Matches 23; Conservative 14; Mismatches 20; Indels 1
                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/346,510B
CURRENT FILING DATE: 1999-07-01
PRIOR APPLICATION NUMBER: 08/871,732
PRIOR FILING DATE: 1997-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: O'Brien, Timothy J.
APPLICANT: Wang, Yinxiang
TITLE OF INVENTION: SH3-Containing Protein, DNA and Uses Thereof
                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (609) 921-452
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                FEATURE:
NAME/KEY: Domain
                                                                                                                                                                                                                                                   LENGTH: 54
TYPE: PRT
                                                                                                                                                                                                                            ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: DC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (609) 921-5901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Gaul, Timothy J.
REGISTRATION NUMBER: 33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/646,537B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: P.O. Bo:
CITY: Princeton
STATE: New Jers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 844 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: U.S.A. ZIP: 08543-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   835 YVEED--YSE 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         786 AKARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----IGWFPSN 834
28 AQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86 LVREQRVYQE 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26 ARAQEDYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P.O. Box 4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (609) 921-4526
                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                         14.3%; Score 84.5; DB 3; 32.3%; Pred. No. 0.00089; 1tive 13; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33,111
                                                                                        Length 54;
                                            Indels
                                            11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

ARYDFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR--

-VGWFPANYV 49

88 RE

89

```
APPLICANT: Boriack-Sjodin, Ann
APPLICANT: Margarit, S. M.
APPLICANT: Margarit, Dafna
APPLICANT: Cole, Philip
APPLICANT: Cole, Philip
APPLICANT: Cole, Philip
APPLICANT: Kuriyan, John
ITILE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF USE
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 600-1-228N
CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT APPLICATION NUMBER: 600093,631
EARLIER APPLICATION NUMBER: 60093,631
EARLIER FILING DATE: 1998-07-21
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                              US-09-346-510B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-346-510B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT ; ORGANISM: Saccharomyces cerevisiae US-09-356-952-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-356-952-4
                                                                                                                                                                                                                                                  SEQ ID NO 24
LENGTH: 48
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                PATENT NO. 6281014
GENERAL INFORMATION:
APPLICANT: O'Brien, Timothy J.
APPLICANT: wang, Yinxiang
TITLE OF INFENTION: SH3-Contai
         Matches
                       Best Local Similarity
                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 24, Application US/09346510B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/09356952 Patent No. 6117663
                                                                                                                                                                                                                                                                                                                 FILE REFERENCE: D6221CIP
CURRENT APPLICATION NUMBER: US/09/346,510B
CURRENT FILING DATE: 1999-07-01
PRIOR APPLICATION NUMBER: 08/871,732
PRIOR FILING DATE: 1997-06-09
NUMBER OF SEQ ID NOS: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                              LOCATION: 2...49
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                        FEATURE: NAME/KEY: Domain LOCATION: 2...49
                                                                                                                                                                                                                         ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH: 1589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 WWDGLVIDDSNGKVN-RGWFPQNFGRPLR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63 FWAGSVYGDHQDEMGIVGYFPSNLVREQR 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45 LSSSPSTSELTSIRPIGIVVAAYDFNYPIKKDSSSQLLSVQQGETIYILNK----NSSG- 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50 EE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 LSSKKLCADEECVYTISLARAQEDYNAP-----DCRFINVKKGQQIYVYSKLVTENGAGA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 14.0%; Score 82.5; DI Similarity 28.1%; Pred. No. 0.2; Similarity 18.1%; Mismatches
      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                51
                                                                                                          amino acid sequence of Vav SH3 domain at position 2 through position 49 of SEQ ID No. 6281014\ 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SH3-Containing Protein, DNA and Uses Thereof
  12.9%; Score 76.5; DB 3 31.6%; Pred. No. 0.0084; tive 12; Mismatches 1
                                       DB 3; Length 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 3; Length 1589;
    16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35; Indels 11;
Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
Gaps
2
```

```
Ş
US-08-583-799-4
                    RESULT 8
                                                                            밁
                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                 US-08-164-839-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-164-839-4
                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4, Applic
Patent No. 5514573
                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: YASUEDA, HISASH:
APPLICANT: NAKANISHI, KAZU
APPLICANT: MOTOKI, MASAO
APPLICANT: NAGASE, KAZUO
APPLICANT: MATSUI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: V
                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 10
                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, ADDRESSEE: P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                              ENGTH:
                                                                          447 KEREVYKKAGRRVTEPSNEI 466
                                                                                                                                                 392 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 446
                                                                                                             88 REQRVYQEATKEI -- PTTDI 105
                                                                                                                                                                                    31 DYNAPDCRFINVKKGQQIYVYSKLYTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                    21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 DFCARDRSELSLKEGDII----KILNKKGQQGWWRGEIYGR-----VGWFPANYV 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Virginia
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08164839
                                                                                                                                                                                                                                                                                                                                                                                        694 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B: P.C.
1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (703)413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAKANISHI, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YASUEDA, HISASHI
                                                                                                                                                                                                                                              12.5%; Score 74; DB 1; Length 694; 26.2%; Pred. No. 0.79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/164,839
                                                                                                                                                                                                                                  21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-599-0
                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                10;
```

Sequence 4, Application US/08583799
Patent No. 5607849
GENERAL INFORMATION:

APPLICANT:

YASUEDA,

HISASHI

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                    US-08-164-839-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-583-799-4
                                                                                                                                                                                                                                                                                         Sequence 6, Application US/08164839 Patent No. 5514573
                                                                                                                                                                                                                                                                Patent No. 5514573
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 248855 OPAT UR INFORMATION FOR SEQ ID NO: 4:
                                                                                                            APPLICANT: YASUEDA, HISASHI
APPLICANT: MAKANISHI, KAZUO
APPLICANT: MOTOKI, MASAO
APPLICANT: NAGASE, KAZUO
APPLICANT: MAGASE, KAZUO
APPLICANT: MAGASE, KAZUO
APPLICANTION GENE ENC
TITLE OF INVENTION: FROM FIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 694 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 10 REFERENCE/DOCKET NUMBER: 10 REFERENCE: 100 INFORMATION: TELEPHONE: (703)412-3000
                                                                    CORRESPONDENCE ADDRESS
                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5607849man F.
NAME: Oblon, NUMBER: 24,618
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (703)413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                             ADDRESSEE: OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT ADDRESSEE: P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/004,729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                          447 KEREVYKKAGRRVTEPSNEI 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              392 EVNADTIYWIYQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88 REQRVYQEATKEI -- PTTDI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Virginia
7: U.S.A.
E: P.C.
1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MATSUI, HIROSHI
                                                                                                                                                                                                                         NAKANISHI, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAKANISHI, KAZUO
                                                                                                                                                                                                                                              YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOTOKI, MASAO
NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OBLON, SPIVAK, McCLELLAND, P.C.
                                                                                                            GENE ENCODING TRANSGLUTAMINASE DERIVED FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12.5%; Score 74; DB 1; Length 694; 26.2%; Pred. No. 0.79; tive 21; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/583,799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

Patent No.

GENERAL INFORMATION: APPLICANT: YASUED

APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:

MOTOKI, MASAO NAGASE, KAZUO MATSUI, HIROSHI

YASUEDA, HISASHI NAKANISHI, KAZUO

NUMBER OF SEQUENCES: 7

TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/583,799

COMPUTER READABLE FORM:

COUNTRY:

U.S.A.

22202

STREET: 1755 Jefferson Davis Highway, Fourth Floor CITY: Arlington STATE: Virginia

ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT ADDRESSEE: P.C. Sequence 6, Application US/08583799

```
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-164-839-6
                                                                                                                                                                          뭉
                                                                                                                                                                                                                Ś
                                                                                                                           Ş
US-08-583-799-6
                                                                                                                                                                                                                                                             Matches 21;
                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (703)412-3000
TELEPAX: (703)413-2220
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 695 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-
TELECOMMUNICATION INFORMATION:
TET TELECOMMUNICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA: 08/004,729
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                        393 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 447
                                                                                     448 KEREVYKKAGRRVTEPSNEI 467
                                                                                                                           88 REQRVYQEATKEI -- PTTDI 105
                                                                                                                                                                                                                31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Virginia
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                   695 amino acids
                                                                                                                                                                                                                                                         12.5%; Score 74; DB 1; Length 695; ilarity 26.2%; Pred. No. 0.79; Conservative 21; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/164,839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                             28; Indels 10;
                                                                                                                                                                                                                                                             Gaps
```

```
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
US-08-630-915A-210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-583-799-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 210, Application US/08630915A Patent No. 6309820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
12.5%; Score 74; DB 1.
Best Local Similarity 26.2%; Pred. No. 0.79;
TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (703)412-3000
TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL
                                              REFERENCE/DOCKET NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-174
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELEPAY: '''''
                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,8
                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 03-APR-19:
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: SPARKS, Andrew B.
APPLICANT: HOFFWAN, No. 6309820h
APPLICANT: KONTY, Brian K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5607849man F.
REGISTRATION NUMBER: 24.618
REGISTRATION NUMBER: 24.618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: KAY, Brian K.
APPLICANT: FOWLKES, Dana M.
APPLICANT: MCCONNELL, Stephen J.
TITLE OF INVENTION: POLYPEPTIDES HAVING A FUNCTIONAL
TITLE OF INVENTION: DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
TITLE OF INVENTION: USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                          TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA : ZIP: 10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      448 KEREVYKKAGRRVTEPSNEI 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          393 EVNADTIYWIVQKDGQR-----RKITEDHASVGKNISTKSVYGNHREDVTLHYKYPEGSQ 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88 REQRVYQEATKEI -- PTTDI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGA---FWAGSVYGDHQDEMGIVGYFPSNLV 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    [: 695 amino acids
   amino acid
XGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                       New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Pennie & Edmonds LLP
1155 Avenue of the Americas
                                            (212) 869-8864/9741
                                                                                                                                                                                                                       03-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     227
                                                                                                                                                                                                                                            US/08/630,915A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

```
밁
                                                                                                                                                         US-08-630-915A-198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-630-915A-198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-630-915A-210
                                                                               Matches
                                                                                         Query Match 11.7%; Score 69; DB 4; Length 322; Best Local Similarity 30.2%; Pred. No. 1.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 198, Application US/08630915A Patent No. 6309820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                      TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/630,915A FILING DATE: 03-APR-1996 CLASSIFICATION: 536 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: FOWLKES, Dana M.
APPLICANT: MCCONNELL, Stephen J.
TITLE OF INVENTION: POLYPEPTIDES HAVING A FUNCTIONAL
TITLE OF INVENTION: DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
TITLE OF INVENTION: USING SAME
                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                      NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,:
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
ZIP: 10036-2711
                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                  TELEPHONE: (212) 69-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                               40 INVKKGQQIYYYSKLVTENGAGAFWAGSYYGDHQDEMGIVGYFPSNLVREQRVYQEATKE 99
72 LSLVKGSRVTVMEKC-----SDGWWRGSYNGQ------IGWFPSNYVLEE--VDEAVAE 117
                                                                       19; Conservative 11; Mismatches 19; Indels 14; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19 LSLIKGTKVIVMEKICSD----GWWTGSYNGQ-----VGWFPSNYVTEE 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40 INVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQ 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New York
                                                                                                                                                                                                                                                      322 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOFFMAN, No. 6309820h
                                                                                                                                                                                               unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAY, Brian K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPARKS, Andrew B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pennie & Edmonds LLP
                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11.8%; Score 69.5; DB 4; Length 58; 31.4%; Pred. No. 0.09;
                                                                                                                                                                                                                                                                                                                                                                                                      18,872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11;
                                                                                                                                                                                                                                                                                                                                                                                            1101-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

ફ

100 IPT 102

```
RESULT 14
US-08-164-839-31
; Sequence 31, Application US/08164839
; Patent No. 5514573
; Patent No. 5514573
                                                                                                                                                                                                맑
                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                              US-08-630-915A-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-630-915A-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
                GENERAL INFORMATION:
APPLICANT: YASUEDA
APPLICANT: NAKANISI
APPLICANT: MOTOKI,
                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No. 6309820 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 38,
                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: 38:
                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: ur
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/630,915A FILING DATE: 03-APR-1996 CLASSIFICATION: 536 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: TEM: PC-DOS/MS-DOS
COPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 462 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: KAY, Brian APPLICANT: FOWLKES, D APPLICANT: McCONNELL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |:
118 SPS
                                                                                                                                                                                                453 -----LTTDMD 458
                                                                                                                                                                                                                                                                   407 DYTAQNDDELAFNKGQIINVLNKEDPD-----WWKGEVNGQ------VGLFPSNYVK-- 452
                                                                                                                                                                                                                                  91 RVYQEATKEIPTTDID 106
                                                                                                                                                                                                                                                                                                    31 DYNAPDCRFINVKKGQQIYVYSKLVTENGAGAFWAGSVYGDHQDEMGIVGYFPSNLVREQ 90
                                                                                                                                                                                                                                                                                                                                     ch 11.3%; Score 67; DB 4; Length 462; l Similarity 31.6%; Pred. No. 3.6; 24; Conservative 7; Mismatches 21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misrock, S. Leslie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08630915A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1155 Avenue of the Americas
NAKANISHI, KAZ
MOTOKI, MASAO
NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HOFFMAN, No.
KAY, Brian K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (212)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FOWLKES, Dana M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPARKS, Andrew B.
                                                   YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pennie & Edmonds LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                             peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         869-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USING SAME
: 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
                                    KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6309820h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1101-174
                                                                                                                                                                                                                                                                                                                                     24;
                                                                                                                                                                                                                                                                                                                                     Gaps
```

Patent No. 5514573
GENERAL INFORMATION:

APPLICANT:

NAKANISHI, KAZUO

YASUEDA, HISASHI

APPLICANT:

APPLICANT: MOTOKI, MASAO APPLICANT: NAGASE, KAZUO APPLICANT: MATSUI, HIROSHI

TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH NUMBER OF SEQUENCES: 72

CORRESPONDENCE ADDRESS

CITY: Arlington STATE: Virginia

STREET: ADDRESSEE:

1755 Jefferson Davis Highway, Fourth Floor

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT,

COUNTRY:

Virginia Y: U.S.A.

Sequence 33,

Application US/08164839

```
밁
RESULT 15
US-08-164-839-33
                                                                                    片
                                                                                                                          Ś
                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: protein US-08-164-839-31
                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Oblon, No. 5514573man F
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-5
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
TELEFAX: (703)413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: OBLON, SPIVAK, MCCUBBLEW, ..... ADDRESSEE: P.C.
STREET: 1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (703)413-2220
TELEX: 248855 OPAT UR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 1755 Jei
CITY: Arlington
                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: Virginia COUNTRY: U.S.A.
                                                                                 413 SGVGKNISTKSLYGDYREDVTLHYKYPEGSKKEREVYQKAGHRI 456
                                                                                                                                                                 356 ELSDGEYCCGPCPVTAIKEGNLSVKYDAP---FIFAEVNADIIYWMAGPGGERKKIDVDQ
                                                                                                                        58 NGAGA-FWAGSVYGDHODEMGIVGYFPSNLVREQRVYQEATKEI 100
                                                                                                                                                                                                          7 KLSSKKLCADEECVYTISLARAQEDYNAPDCRFINVKKGQQIYVY-----SKL-VTE 57
                                                                                                                                                                                                                                                     26;
                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22202
                                                                                                                                                                                                                                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                     687 amino acids
                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                 11.3%; Score 66.5; DB 1; Length 687; 25.0%; Pred. No. 7.4; ative 19; Mismatches 46; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5514573man F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/164,839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-599-0
                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                   412
```

```
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION NOTA:
APPLICATION NUMBER: US/08/164,839

FLING DATE: 04.04,729
FLING DATE: 14-JAN-193
ATTORNEY/ASENT INFORMATION:
NAME: OBJON, No. 5514573man F.
REGISTRATION NUMBER: 24.618
REFERENCE/DOCKET NUMBER: 10-599-0

TELECHOME: 031412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELECHOME: (703)412-2300
TELE
```

```
Command line parameters:

-MODEL-frame+ p2n.model -DEV=Xlh
-Q=/cgn2 1/USPTO_spool/US10019455/runat 29122003 160347 240/app_query.fasta_1.1770
-DB=GenEmb1 -QFMT=fastap -SUFFIX=rge -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -EXD=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_M1N=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER_US10019455_@CGN 1 1 6034 @runat 29122003 160347 240 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQÜERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPDF=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
December 29, 2003, 16:11:59; Search time 1810.69 Seconds (without alignments) 2485.278 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-49
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2888711 seqs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                          gb_pr: * * gb_pr: * * gb_pr: * *
                                                                                                                                                                                                                                                                                                                                                                gb_ph:*
                                                                                                                                                                                                                                                                                                                                                                               gb_pat:*
                                                                                                                                                                                                                                                                                                                                                                                                               gb_om:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb_ba:*
            em_ro:*
em_sts:*
                                              em_ov: *
em_pat: *
em_pl: *
                                                                                                                                   em_mu:*
                                                                                                                                                                                                       em_ba:*
em_fun:*
                                                                                                                                                                                                                                          gb_un:*
                                                                                                                   em_or:*
                                                                                                                                                                     em_in:*
                                                                                                                                                                                     em_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                   07:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7.0
```

100												
5												
). D			39:									
is the number of results	em_htgo_other:*	htgo_	em_htgo_hum:*	em_sy:*	em_htg_vrt:*	htg	em_htg_rod: *	em_htg_mus:*	em_htg_other:*	em htg inv: *	em htg hum: *	em_vi:*
1												

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.

Score

Query Match Length DB

ij

Description

	C	C	•						a	ი		O																																	;
4 .	4		, ,	± +	40	9	8	37	36	G G	4	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18		16	15	14	13	12	11	10	v	6 0	7	σ	ψı	4	w	N	Ъ	1
264.5	264.5	004.0	0 0	0 4	264.5	64	64	64	65	65	79	15	395	458	458	461.5	515	515	541	541	541	541	541	541	541	541	541	541	541	541	541	574	574	574	574	574	574	574	574	574	591		591		1 1 1 1 1 1
44.8	.4		•		44.8	4			44.9		7.3	3.4		77.5	77.5	8	.7		Ľ	ŗ		1-1	٠	91.5	٠,	٠	۲	91.5	۲		۲	7.	97.1	97.1	97.1	97.1	97.1	7.	97.1	97.1	100.0	100.0	100.0		1 1 1 1 1 1
459 9	459	409	459	459	396	396	330	330	442	442		15	466	261	261	484	307	307	1422	923	923	865	846	521	521	521	521	384	384	330	330	1054	958	947	947	929	384	384	330	330	384	8	330	330	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
9	0	σ	ι σ	· o	12				σ	σ	N	N	υ	σ	σ	ഗ	0	9	9	თ	σ	9	9					თ	σ	σ	σ	10	10	თ	σ	10	σ	σ	σ	σ	თ	σ	6	σ	;
HSMGRPMA	AX287209	ŭ	16	942	00	O	AX016802	A42959	œ	3143	103	9190	AF233519	313	082	w	73	83	HSA242552	312	82	4350	26	AX491252	AX454774	AX362311	5881	BD093103	8	BD093117	28	AF233333	MMU243939	D09312	BD010821	AF243504	BD093106	BD010805	BD093118	BD010817	13	010	009313	BD010836	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
50 H.	87209	80525	AX016785 Sequence	942 S	007775	7044 Homo sap	802	959 Sequence	840 S	31430 Seqn	10362 Mus mu	06161 Rattus	3519 Rana c	130 Novel	10829 Novel [3518 Gallus g	93131 Novel po	30 Novel	Ното в	3121 Novel po	Novel po	Homo	33261 Homo sap	N	54774	62311	58818 Sequer	3 Novel	0802 Novel	7 Novel	-	33 Mus	43939 Mus m	D093122 Novel	1 Novel	43504 Mus n	_	0805 Novel	8 Novel	BD010817 Novel pol	136 Novel	35 Novel	093137 Novel	BD010836 Novel pol	******************

ALIGNMENTS

```
REFERENCE
AUTHORS
     Ş
                                                                     Ş
                                                                                                          밁
                                                                                                                                    Ş
                                                                                                                                                                           밁
                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                          β,
                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-49 (1-110) x BD010836 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                          181
                                                                                                                                                                           121
      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                  61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                            41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                           61 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus sp.
Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel polypeptide and DNA thereof. BD010836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PC C07K14
G01N33/53/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PI YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,
SHINICHI MOGI,
PI YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAKEDA CHEMICAL INDUSTRIES LTD
OS RATTUS SP. (281)
PN JP 200106994-A/37
PD 21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mog
Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 37 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP 2001069994-A/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD010836.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD010836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02, A61P19/08,
                                                       TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                             TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                      TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                       GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGT 240
                                                                                                                                                                         AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                          CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                        HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism='Rattus sp. (r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
                                                                                                                                                                                                                                                                                                                                                                                                                          3.08e-63
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:18639209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (rat)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mogi, S., Noguchi, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                            330
110
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 31-JAN-2002
                                                                                                                                                                         180
                                                                                                                                        80
                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
BD093137
                                  밁
                                                                  Ś
                                                                                                       밁
                                                                                                                                    Ś
                                                                                                                                                                       밁
                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
 Ş
                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                       US-10-019-455A-49 (1-110) x BD093137 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YUN
C12N1
A61K36/17,
PC A61K36
PC 02,6
CC 02,6
FH
                                  181
                                                                                                   121 AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 CCAACCACGGATATTGACTTCTTCTGTGAA 330
   18
                                                                    61
                                                                                                                          41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                       61
                                                                                                                                                                                                 21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                        بر
                                                                                                                                                                                                                                                        1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HIDEYUKI TANAKA
OS Rattus sp. (rat)
PN WO 0102564-A/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel polypeptide and its DNA
Patent: WO 0102544-A 37 11-JAN-2001;
TAKEDA CHRMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, K
OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ito, Y., Nishi, K., Ogi, K., Yoshimura, K. and Tanaka, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD093137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO 0102564-A/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD093137.1 GI:22638725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD093137
TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                       GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                     TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polypeptide and its DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
a 62 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                        591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                            3.08e-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ogi, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Okubo, S., Mogi, S., Noguchi, Y
                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                         Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                        110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KAZUHIRO
                                                                  90
                                                                                                   180
                                                                                                                                    60
                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                     20
                                                                                                                                                                     120
                                                                                                                                                                                                                                      60
```

Ś

밁

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
BD010835
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-49 (1-110) x BD010835 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                          175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,
Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 36 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
OS RATUS SP. (rat)
PN JP 2001069994-A/36
PD 21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                            21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                          55
                61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A61P19/08,
PC C07K14/-
G01N33/53//
PC C12P21/-
CC C12P21/-
CFH Key
FT Source
FT /organia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OS Rattus sp
PN JP 200106
PD 21-MAR-20
PF 29-JUN-20
PR 29-JUN-20
PR YASUAKI I
SHINICHI MOGI,
                                                                                                                                                                                                                                                                                                                   1 HisGlyMetPheMetAspLysLeuSerSerLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PC
PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD010835.1 GI:18639208 JP 2001069994-A/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel polypeptide and DNA thereof. BD010835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus.
                                                                                                      AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                              TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                    CATGGCATGTTTATGGATAAACTTTCTTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jource 1. .384 /organism='Rattus sp. (rat)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             рJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Rattus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.61e-63
591.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ogi, K., Okubo, S., Mogi, S., Noguchi, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    384
110
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 31-JAN-2002
                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                      20
                                                                  밁
                                                                                                                 Ś
                                                                                                                                                                        B
                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
BD093136
                                                                                                                                                                                                                                                                               US-10-019-455A-49 (1-110) x BD093136 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SDOOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                            115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            355 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   295 TATTTCCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCCACCAAGGAGATT
41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                              21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                55 CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus sp.
Rattus sp.
Rukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel polypeptide and its DNA
Patent: WO 0102564-A 36 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
HIDEYUKI TANAKA
OS Rattus sp. (rat)
PN WO 0102564-A/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PI
PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and its DNA BD093136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ito, Y., Nishi, K., Ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., ogi, K., o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO 0102564-A/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BD093136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD093136.1
                                                                                                                                                                                                    HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
/db_xref="taxon:10118"
72 c 109 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Rattus sp."
/mol type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                    3.61e-63
591.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:22638724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           384 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Okubo, S., Mogi, S.,
                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                 384
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Noguchi, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      354
```

S 맑 Ş В ঠ 망 S

240 90

```
RESULT 5
BD010817
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                  S
                                                   용
                                                                                    Ś
                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                        US-10-019-455A-49 (1-110) x BD010817 (1-330)
                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                            A61P19/08,
PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
CC FH Key
FT source
FT /organi
21 TyrThr11eSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OS Mus sp. (mouse)
PN J001069994-A/18
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
PR 29-JUN-2000 JP 2000195911
PR YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel polypeptide and DNA thereof.
BD010817
BD010817.1 GI:18639190
                                                                           1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAKEDA CHEMICAL INDUSTRIES LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H. Novel polypeptide and DNA thereof Patent: JP 2001059994-A 18 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP 2001069994-A/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTGGGT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                  /organism='Mus sp. (mouse)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                  /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
                                                                                                                                                                            3.68e-61
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                       60 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                     92 g
                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                             PAT 31-JAN-2002
                     40
                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
 밁
                                                                       US-10-019-455A-49 (1-110) x BD093118 (1-330)
                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                          Query Match:
                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41 AsnVallysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 120
 <u>بــ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 18 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAYOGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 330)
                    1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and its BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO 0102564-A/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD093118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD093118.1 GI:22638706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                              A61K38/17
 CATGGTGTATTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOGI,
YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus sp. (mouse)
W0 0102564-A/18
W0 0102564-D/18
11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                     91
                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                           02, C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                                                                             A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                  /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
60 c 92 g
                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers Location/Qualifiers
                                                                                                      3.68e-61
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330 bp
                                                                                                                                           Conservative: Mismatches:
                                                                                                                            Indels:
                                                                                                                                                                                                                                                                     87 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
```

KAZUHIRO

Ş

밁 Ş 문 Ş D. Ş 밁

밁 Š

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
BD010805
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                      Percent Similarity:
Best Local Similarity:
                           US-10-019-455A-49 (1-110) x BD010805 (1-384)
                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ito, Y., Nishi, K., Ogi, K., Okubo, S., Mogi, S., Noguchi, Y.,
Yoshimura, K. and Tanaka, H.
Novel polypeptide and DNA thereof
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A6 6 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
OS Mus sp. (mouse)
PN JP 2001069994-A/6
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
PF 29-JUN-2000 JP 2000195911
PF 29-JUN-2000 JP 2000195911
PF 29-JUN-2000 JP 2000195911
PR SHINICHI MOGI,
PI YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, PI SHINICHI MOGI,
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
PI YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                         PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
FT Key
FT source
FT /organi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel polypeptide and DNA thereof. BD010805 BD010805.1 GI:18639178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JP 2001069994-A/6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BD010805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A61P19/08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                             /organism='Mus sp. (mouse)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50, PC
                                                                                                                                                                                                                                                   /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 1
                                                                                      4.32e-61
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                      Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                       107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
BD093106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                       Percent Similarity:
Best Local Similarity:
                                                                                    Score:
                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                    Pred. No.:
                                                                                                                       Alignment Scores:
                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOCOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                175 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                115 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55 CATGGTGTATTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Yoshimura,K. and Tanaka,H.
Novel polypeptide and its DNA
Patent: WO 0102564-A 6 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PR PR PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OGI, SHOICHI OKU
HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus (bases 1 to 384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel polypeptide and its BD093106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD093106.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO 0102564-A/6.
                                                                                                                                                                                                                                                                                                                                                                                          A61K38/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SHOICHI OKUBO, SHINICHI MOGI, YUKO NOGUCHI, KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                            Key
                                                                                                                                                                                                                                                                                                                                                                                                          YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                                                                      86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus sp. (mouse) WO 0102564-A/6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO, SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
                                                                                                                                                                                                                                                                                                                                                    02,C12R1:19)
                                                                                                                                                                                                                                                                                                                                                                     A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L1-JAN-2001
                                                                                                                                                                                      D
                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                /mol_type="genomic DNA"
/db_xref="taxon:10095"
68 c 111 g 1
                                                                                                                                                                                                                                             organism="Mus sp."
4.32e-61
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (mouse)
                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             384 bp
                     Mismatches: Indels:
                                                          Matches:
Conservative:
                                                                                                                                                                                      107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
384
106
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-AUG-2002
```

Mug.

D.

354

294 80

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 9
AF243504
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
ORIGIN
                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-49 (1-110) x BD093106 (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                       SGS
                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            175 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1. (bases 1 to 929)
                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (09-MAR-2000) Biotechnologies, Institut Pasteur, 25 rue
                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cohen-Salmon, M., Frenz, D., Verpy, E., Voegeling, S. and Petit, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Biol. Chem. 275 (51), 40036-40041 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF243504.1 GI:11991841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus fibrocyte-derived protein (Fdp) mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mesenchyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cohen-Salmon, M., Frenz, D., Liu, W., Verpy, E., Voegeling, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AF243504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pdp, a new fibrocyte-derived protein related to MIA/CD-RAP, has an in vitro effect on the early differentiation of the inner ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0998416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATTGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 929)
                   260
                                                                                                                                                                                                                                                                                                                                                                                                          Roux,
                                 /translation="MARILILLGGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS NLVKEQRVYQEATKEIFTDIDFFCE"
                                                                                               /codon_start=1/product="fibrocyte-derived protein"/protein_id="AAG42355.1"
/db_xref="GI:11991842"
                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"/
                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                             gene="Fdp"
                                                                                                                                                                                                                      'gene="Fdp"
                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
/chromosome="2"
                                                                                                                                                                                                                                                                                                        strain="BALB/c"
                                                                                                                                                                                                                                               . . 929
                                                                                                                                                                                                                                                                                                                                                                                                          Paris 75015, France
                                                                                                                                                                                                       .
395
                   156 c
                                                                                                                                                                                                                                                                                                                       type="mRNA"
                220 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ROD 26-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234
```

```
RESULT 10
BD010821
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-49 (1-110) x AF243504 (1-929)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           123 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AsnValLysGysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                  PC C07K14,
G01N33/53/,
                                                                                                                                                                                                                                                           SHINICHI MOGI,
PI YUKO NOGU
PC C12N15/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                            TAKEDA CHEMICAL INDUSTRIES LTD
OS Mus sp. (mouse)
PN JP 2001069994-A/22
PD 21-MAR-2001
PF 29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001069994-A 22 21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD010821.1 GI:18639194
JP 2001069994-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel polypeptide and DNA thereof. BD010821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD010821
                                                                                                                                                                                                                                           A61P19/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAACCACGGATATTGACTTCTTCTGTGAA 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 947)
                                                                                                                                                                                                                                                              C12N15/09, A61K38/00, A61K45/00, A61K48/00, A61P9/00, A61P19/02, PC
                                                                                                                                                                                                                                                                                                                       YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                  source 1. .947
/organism='Mus sp. (mouse)'.
                                                                                                                                                                                                                       C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50,
                                                                                                                                                                                                                                                                                YUKO NOGUCHI, KOJI YOSHIMURA, HIDEYUKI TANAKA
                                                                                                                      source
                                                                                                                                                                                C12P21/08, C12N15/00, A61K37/02, C12N5/00
/organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.1e-60
574.00
99.09%
96.36%
97.12%
                                                               .947
                                                                                                                          Location/Qualifiers
1. .947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
```

```
RESULT 11
BD093122
       FEATURES
                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-49 (1-110) x BD010821
                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          245
                                                                                                                                     HIDEYUKI TANAKA
OS MUS SP. (mou
PN WO 0102564-P
PD 11-JAN-2001
PF 29-JUN-2000
PR 30-JUN-1999
PI YASUAKI ITO
                PI MOGI,
PI YUKO NO
PC CLINI5/
A61K38/17,
PC A61K39/
PC 02,C12R
CC C2,C12R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                   Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H. Novel polypeptide and its DNA Patent: WO 0102564-A 22 11-JAN-2001; TAKEDA CHEMICAL INDUSTRIES LTD,YASUAKI ITO,KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                     Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                    BD093122
BD093122.1 GI:22638710
WO 0102564-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide and its DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                           BD093122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATTGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                 (bases 1 to 947)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279
                                                                                                                                                                             Mus sp. (mouse)
WO 0102564-A/22
11-JAN-2001
                                                                           MCGI,
YUKO NOGUCHI,KOJI YOSHIMUBA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00,
                                                                                                                                   29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                      A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.12e-60
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-947)
                                                                                                                                                                                                                                                                                                                                                                                                                                        947 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               289
                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              947
106
3
                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                 Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                         REFERENCE
AUTHORS
TITLE
                                          FEATURES
                                                      COMMENT
                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                            MMU243939
                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                JOURNAL
MEDLINE
PUBMED
                                                                                             JOURNAL
                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                               AUTHORS
                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
```

```
US-10-019-455A-49 (1-110) x BD093122 (1-947)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65 CATGGTGTATTTATGGATAAACTTTCTTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity:
                                                                                                           Submitted (20-JUL-1999) Rendtorff N.D., Department of Medical Genetics, Institute of Medical Biochemistry and Genetics, Blegdamsvej 3, 2200 Copenhagen N, DENMARK Related sequence: AJZ42552.
                                                                                                                                                                                                           2 (bases 1 to 958)
Rendtorff, N.D.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AJ243939.1 GI:12619174 melanoma inhibitory activity-like protein; Mial gene Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                            polymorphism that abolishes translation Genomics 71 (1), 40-52 (2001)
                                                                                                                                                                                                                                                                                                                                                                       Identification and characterization of an inner ear-expressed human melanoma inhibitory activity (MIA)-like gene (MIAL) with a frequent
                                                                                                                                                                                                                                                                                                                                                                                                                                            Rendtorff, N.D., Frodin, M., Attie-Bitach, T., Vekemans, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus mRNA for melanoma inhibitory activity-like protein (Mial gene).
                                                                                                                                                                                                                                                                                                    21100875
                                                                                                                                                                                                                                                                                                                                                                                                                         Tommerup, N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                   11161796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AJ243939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MMU243939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAACCACGGATATTGACTTCTTCTGTGAA 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
/organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus sp."
/mol_type="genomic DNA"
/db_xref="taxon:10095"
a 158 c 221 g 28
                                                                          . . 958
                                                                                           ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.12e-60
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        đq 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               289 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ROD 29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
```

```
Best Local Similarity:
Query Match:
                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                    RESULT 13
AF233333
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-49 (1-110) x MMU243939 (1-958)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment
                                            REFERENCE
                                                                                                                                                                                                                              밁
                                                                                                    SOURCE
                                                                                                                KEYWORDS
                                                                                                                           VERSION
                                                                                                                                            ACCESSION
                                                                                     ORGANISM
    TITLE
                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sig_peptide
                                                                                                                                                                                                                                378
                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                    198
                                                                                                                                                                                                                                                                                                                                                                                                                                                            138
                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 1054)
Robertson, N.G., Heller, S., Lin, J.S., Resendes, B.L., Weremowicz, S., Denis, C.S., Bell, A.M., Hudspeth, A.J. and Morton, C.C.
A novel conserved cochlear game Omon. 13-1177
                                                                                                                                          Mus musculus otoraplin mRNA, AF233333
                                                                                                                              AF233333.1
                                                                                                                                                                        AF233333
                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                       AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                       ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                      TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                       TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                             GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                     GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGTGTATTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MARILILLLGGLVVLCAGHGVFMDKLSSKKLCADEBCVYTISLA RAQEDYNAPDCRFIDVKKGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS NLVKEQRVYQEATKEIFTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="Mial"
23. .81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /chromosome="2"
/map="79.4-80 cM"
/tissue_type="whole fetus"
/dev_stage="12.5 pc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
/product="melanoma inhibitory activity-like protein"
/protein id="CAC27444.1"
/db_xref="GI:12619175"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'gene="Mial"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.13e-60
574.00
                                                                                                                                GI:8927429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
Conservative:
                                                                                                                                                                        đđ
                                                                                                                                                            complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299 t
                                                                                                                                                                                                                                 407
                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                           ROD 06-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                               197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                 317
                                                                                                                                                                                                                                                                                                                                                                                                       257
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                         ફ
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                     묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        score:
    REFERENCE
                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sg
```

```
PUBMED
REFERENCE
                                                                                                                                                                         RESULT 14
BD010816
LOCUS
                                                                                                VERSION
KEYWORDS
                                                                                                                                   DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-49 (1-110) x AF233333 (1-1054)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                       372
                                                                                                                                                                                                                                                                                                                                312
                                                                                                                                                                                                                                                                                                                                                                                                         252
                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   192 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                            6,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genomics
20334619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Robertson, N.G., Heller, S., Lin, J.S., Denis, C.S., Bell, A.M., Hudspeth, A.J. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (10-FEB-2000) Pathology, Br Francis Street, Boston, MA 02115, USA
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 330)
                                                          Homo sapiens (human)
                                                                                                                Novel polypeptide and DNA thereof.
BD010816
BD010816.1 GI:18639189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        analysis,
                                                                                                  JP 2001069994-A/17
                                                                                                                                                                            BD010816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .0873378
                                                                                                                                                                                                                                                                                                                                                                                                                            GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                       ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 1054)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66 (3),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="otoraplin"
/protein_id="AAF82079.1"
/protein_id="AAF82079.1"
/db_xref="01:8927430"
/db_xref="01:8927430"
/translation="MARILILLLEGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
/translation="MARILILLEGLVVLCAGHGVFMDKLSSKKLCADEECVYTISLA
RAQEDYNAPDCRFIDVKXGQQIYVYSKLVTENGAGEFWAGSVYGDHQDEMGIVGYFPS
NLVKEQRVYQEATKEIPTTDIDFFCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and chromosomal mapping
66 (3), 242-248 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:10090"
18._.404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="OTOR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.25e-60
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              265 g
                                                                                                                                                                            330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                310 t
                                                                                                                                                                                                                                                         401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brigham and Women's Hospital,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Resendes, B.L., and Morton, C.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1054
                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Weremowicz,
                                                                                                                                                                                PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                    371
                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                             311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131
```

```
DEFINITION
ACCESSION
VERSION
                                                                                    RESULT 15
BD093117
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                       Ś
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                             뭥
                                                                                                                                                                                                                                                                                         Ś
 SOURCE
ORGANISM
                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-49 (1-110) x BD010816 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                          101
                                                                                                                                              301
                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PC C07K14/
G01N33/53//
PC C12P21/
CC C12P21/
FH Key
FT source
FT /organi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OS Homo sapis
pN 7 2001065
pD 21-MAR-200
pF 29-JUN-200
pF 29-JUN-210
pR YASUAKI II
SHINICHI MOGIU
PC C12N15/09
                                                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ito,Y., Nishi,K., Ogi,K., Okubo,S., Mogi,S., Noguchi,Y., Yoshimura,K. and Tanaka,H.
Novel polypeptide and DNA thereof
Patent: JP 2001065994-A 17 21-MAR-2001;
TAKEDA CHEMICAL INDUSTRIES LTD
                           BD093117.1 GI:22638705
WO 0102564-A/17.
                                                      Novel polypeptide and its BD093117
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                    BD093117
            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A61P19/08,
                                                                                                                                                              ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                  TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                       TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                                                                                                               GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 240
                                                                                                                                                                                                                                                                                                                                         AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                  TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                      TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                        AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
JP 2001069994-A/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C12P21/08, C12N15/00, A61K37/02, C12N5/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C07K14/47, C07K16/18, C12N1/21, C12N5/10, G01N33/15, G01N33/50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/09,A61K38/00,A61K45/00,A61K48/00,A61P9/00,A61P19/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO OGI, SHOICHI OKUBO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2000 JP 2000195911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.97e-57
541.00
95.45%
89.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                   330 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rt
                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330
98
7
0
                                                                                    linear
                                                                                    PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ы
                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
```

```
Ś
                                                                    片
                                                                                                  S
                                                                                                                                        밁
                                                                                                                                                                    8
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-49 (1-110) x BD093117 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match: DB: .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
0
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yb.
C12N1:
A61K38/17,
PC A61K3°
PC 02, C
CC
FH
301
                              101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                     241
                                                                                                                                        181 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGGAGTCGTGGGT
                                                                                                                                                                                                          121 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                              41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                    81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                      61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                  21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                   1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SS PR PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NOVE1 polypeptide and its DNA
PATENT: WO 0102564-A 17 11-JAN-2001;
TAKEDA CHEMICAL INDUSTRIES LTD, YASUAKI ITO, KAZUNORI NISHI, KAZUHIRO
OGI, SHOICHI OKUBO,SHINICHI MOGI,YUKO NOGUCHI,KOJI YOSHIMURA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PI
PI
PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HIDEYUKI TANAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ito,Y., Nishi,K., Ogi,K., Yoshimura,K. and Tanaka,H.
CCCACCACGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                              TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                    CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YUKO NOGUCHI,KOJI YOSHIMURA,HIDEYUKI TANAKA
C12N15/12,C12N5/10,C12P21/02,C07K14/47,C07K16/18,A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-JAN-2001
29-JUN-2000 WO 2000JP004278
30-JUN-1999 JP 99P 186718
YASUAKI ITO,KAZUNORI NISHI,KAZUHIRO OGI,SHOICHI OKUBO,SHINICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
WO 0102564-A/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02,C12R1:19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A61K39/395,A61K49/16,A61P19/02,A61P19/08,A61K31/7088//(C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="genomic DNA"
/db_xref="taxon:9606"
60 c 91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.97e-57
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Okubo, S., Mogi, S., Noguchi, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88
                                                                                                                                                                                                                                                                                                                                                                                                                                                       330
98
0
                                                                  300
                                                                                                                                                                                                                                              60
                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                    60
```

Search completed: December 29, Job time : 1812.69 secs

2003, 19:57:24

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

Command line parameters:

-MODEL-frame + D2n .model -DEV=Xlh
-MODEL-frame + D2n .model -DEV=Xlh
-Q-/Ggn2 | /USPTO_Spool/US10019455/runat_29122003 | 160347 | 254/app_query.fasta_1.1770
-DB=EST -QFMT=fastap -SUFFIX=rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR SCORE=pct -THR_MAX=100 -THR_M10-0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPS1ZE=500 -MINLEN=0 -MAXLEN=200000000
-USER-US10019455 @CGN 1 1 6063 @runat 29122003 160347 254 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQÜERY -NEG SCORES=0 -MAIT -DSPBLOCK=100 -LONGLOG
-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7 Database : Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Minimum DB seq length: 0
Maximum DB seq length: 200000000 Total number of hits satisfying chosen parameters: Scoring table: Sequence: Title: Perfect score: OM protein - nucleic search, using frame_plus_p2n model Xgapop 10.0 , Xgapext Ygapop 10.0 , Ygapext Fgapop 6.0 , Fgapext Delop 6.0 , Delext December 29, 2003, 16:23:14 ; Search time 1138.05 Seconds (without alignments) 2349.180 Million cell updates/sec BLOSUM62 22781392 segs, 12152238056 residues 1 HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110 US-10-019-455A-49 591 em_htc:*
gb_est1:*
gb_htc:*
gb_htc:*
gb_est3:*
gb_est4:*
gb_est4:*
gb_est6:*
em_est6un:* em_estba:* em_esthum:* em_gss_phg:*
em_gss_vrl:*
gb_gssl:* em gss hum:
em gss inv:
em gss inv:
em gss vrt:
em gss fun:
em gss fun:
em gss fun:
em gss fun:
em gss fun: em_estpl:* em_estov:* em_estmu:* em_estin:* estro:* 7.0 7.0

gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

9	SOURCE	VERSION VERSION	DEFT	Loca	RESULT BQ57001					ი ი		ი							G		O		,																		Result
	RCE	ORDS ION	FINETION	S	LT 1		5 1			41	9 0	86	37	, m	4.	ω c	ა <u>.</u>	30	29	28	3 0	8 50	24	2 6	21	20	9 6	17	16	7 4	٦. ت	12	10	w	ω.	1 W	υī	,t> (w 14	ب ر	? [
							26	60	o O	0,0	263.	S	50 2	20	64	0 0	4 4	4.	64	0 4 4	0.0	o o	თ (79	9 1	<u>ა</u> ა	9 6	413	42	4. 4	. UT	ωı	лU	<u>س</u>	57	ກ ເກ	UT .	ن ر دا د	л u	151	Scor
Suka famm		BQ5700	10n	3057			0.5	лÜп	·		л in	'n	տա	ייט וי	ທ	່ທ່ວ	n ir	ຸ່ເກ	in i	່ຫ ເ	າ່ທ	'n	σi	лůп	ຳ້ທ	80 -	່ງ່ຽ	in	7	. W	iš	2 6	9 0	74	74	7.4	74	74	74	74	CD.
Eukaryota; Mammalia;	, m	0035.1	3510. e gi1	0035			44.0	4.	4.	٠.	4.4	4	Α.	٠.	4.	. 4	4.	٠,٨	. 4	44	٠,٠	4.	4.	۸,	49.5	œ c	٠,	0		٠,	. 80	_ :	ა რ	.7	.7:	٦, ١	7.	97.1	97.1		Query
	culus	-	32				0,	•		•, ,	, ,	•			_								•			•		•			-	-	-			•	·		·		<u> </u>
Metazoa; Eutheria;	(hou	GI : 21	Mouse	1			349	430	381	594	517	453	437	4 m	609	529	л () () () ()	515	507	492	473	929	633	677	3240	280	533	795	485	5 6 5 7 6 5	604	490	474	696	684	809	560	534	7 C 2 C 4 C	398	ngth
	Вe	473	` ~				ΨF) L	9	14	10	φ	9 1	12	12	13 5	بر د. ما د	13	12	12	1 L	13	14	۵ ا	11	13		13	13	بر بر ما د	13	13	بر ب نا د	10	13	ין ני	13	13	ָ ט ני	1 13	DB
Chordata; Rodentia;	mouse)	352	mRNA sec			ALJ	NO		2	5 5	3000E	N	9	BG766	BM791	BU194	B C 6 8 1	BQ892	BM674	87856 871	CA433				AK047												10	200	מית	~~~	B
			duence	dq 8		ALIGNMENTS	324	1750	115	768	1982	97	759	200	767	1561	978	2734	250	478	101	892	404	7227	965	8785	1 4	241	179	622	57343	411	7.59	549	768	4944	741	13	9 6	035	1 1 1 1
Craniata; Vert Sciurognathi;			. CUNA PHINESCRI	mRNA		rs																																			1 1 1 1 1 1 1
ebrata; E Muridae;			nw ad	ar E			AW0233	BF459	AI6209	CA509	BE665	AA6272	AV5927	BG766	BM791	BU194	BC1121	BQ892	BM674	BM856	CA433	BU195	CD360	108044 108044	AK047	89568 80568	AL9258	BU748	BQ565	BECCE.	BQ567	BQ565	BO566	BB611	BQ563	BQ564	BQ569	BQ564	BO268	BQ570	يثبو پ
uteleostomi Murinae; Mu			musculus	ST 19-			df53	nac	tu05	Si-	1154		٠,	JW	7	, ι	D U	734 AGEI	250 UI-1	478 K-E	1401 UI-1	892 AGEI	1404 AGEI	22 7 gio	147965 Mus	785 gil	776 AL92	1241 CH3	179 gi3	144 144	343 gi8	411 gi3	63/ G14.	549 BB6	768 gio	944 g12	741 gii:	134 gil:	498 Gil	035 gil43bl	ption
comi; Mus.			18 CUNA	1				ระ	ഴ	FSO	7	g01.s	AV592759	739014	ST0071	VCOURT	NCCCKT	NCOURT	E-EJO-	X-ESTO140	1-000-	392 AGENCOURT	4COURT	105.Y	muscu	14f04.	-	#018_G	2a07.y	32622	3d08.y	7612.у	3909.Y	11549	5c09.y	7909. y	΄ 🗀	: 1	ະ ເ	Ť 0	

REFERENCE	SOURCE ORGANISM	VERSION KEYWORDS	ACCESSION	DEFINITION LOCUS	BQ570035
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 398)	Mus musculus (house mouse) Mus musculus	BQ570035.1 GI:21473352 EST.	clone gi143b10 5', mRNA sequence. BQ570035	BQ570035 398 bp mRNA linear EST 19-JUN-2002 gi143b10.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA	

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Structural Cell Biology
National Institute of Deafness and other Communication Disorders
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: 143 row: b column: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 301-402-1599
/dev_stage="Tost initial day 5 to 13"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost initial day 5 to 14"
//dev_stage="Tost i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="gi143b10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sex="male and female"
```

```
RESULT 2
BQ564607
                                                                   밁
                                                                                                         Ş
                                                                                                                                                    뮍
                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-49 (1-110) x BQ570035 (1-398)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                       101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                               187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                    127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                 367 CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                         247 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                       61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                          41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                    TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                             TyrPheProSerAssnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HisGlyMetPheMetAspLy8LeuSerSerLy8Ly9LeuCy8AlaAspGluGluCy8Val
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       105 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes not in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." 12% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.19e-71
574.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126
                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                 246
                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                       186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
```

FEATURES COMMENT REFERENCE SOURCE DEFINITION ACCESSION CEYWORDS VERSION AUTHORS ORGANISM JOURNAL source 488 bp mRNA linear E gil9h02.yl Mouse Organ of Corti cDNA pBluescript Mus clone gil9h02 5', mRNA sequence. BQ564607 Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing Contact: Kachar, B. Structural Cell Biology Mus musculus Plate: 19 row: h column: 02 Seq primer: M13RP1 reverse primer (ABI). National Institute of Deafness and other Communication 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Email: kacharb@nidcd.nih.gov Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. Mus musculus (house mouse) BQ564607.1 GI:21467924 (bases 1 to 488) 301-402-1599 /organism="Mus musculus" /mol_type="mRNA" Location/Qualifiers Deafness and other Communication Disorders EST 19-JUN-2002 musculus cDNA

```
SASE COUNT
    Query Match:
DB:
                                                                                                                                                                                                                     Fred. No.:
                                                                                      Best Local Similarity:
                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                 143 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total RNA was extracted using the micro Fasttrack kit (catalog # K1591-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 23721], Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptese (MMLV-RT) and 5-methyl dcTP. The second strand was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Ffu DNA polymerase, ligated with Secor I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clonech Chroma Spin-1000 (Clonetch, Palo Alto, CA) columns to enrich for cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRT cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference rescue plasmid DNA trom the phages. Upon plating of the presence balger brange (catalogue # 21103) was adopted to rescue plasmid DNA trom the phages. Upon plating of the concerts6(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the Sector Bildy Calls and Sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cycles Microsystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cycles Microsystems, Foster City, CA). Sequencing chemistry (Applied Biosystems, Foster Figures and have now function, 45% of censes a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sex="male and female"
/dev_stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/clone_lib="Mouse Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note="Organ: Organ of Corti, Vector: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/note: pBluescript; The
/
                                                                                                                                                                                                                                                                                                                                                                                        genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are unidentified." 83 c 135 g 127 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     strain="BALB/c"
99.09%
96.36%
97.12%
13
                                                                                                                                                                       1.61e-71
574.00
                                                                             Mismatches:
                                                                                                                                   Conservative:
                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ568498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
```

```
US-10-019-455A-49 (1-110) x BQ564607 (1-488)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361 CCAACCACGGATATTGACTTCTTCTGTGAA 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 TÄTTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ568498 514 bp mRNA linear EST 19-JUN-2002
gi109c02.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA
clone gi109c02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plate: 109 row: c column: 02
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 514)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ568498.1 GI:21471815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
/dev stage="Post natial day 5 to 13"
/dev stage="Post natial day 5 to 13"
/clone_lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; Vector: pBluescript; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Organ of Corti; The
/note="Orga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="gi109c02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /strain="BALB/c"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sex="male and female"
```

US-10-019-455A-49 (1-110) x BQ568498 (1-514) Query Match: Best Local Similarity: Percent Similarity: Alignment Scores: 41 21 59 1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 178 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 298 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPhelle 40 147 (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 27612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNAsse H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested ver Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (Catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the resistance helper phage (catalogue # 211203) was selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was strenated mit the cDNA clones were selected and the strenate Highy to terminator seminator chamisator with the universe primer (CAGGAAACAGCRAIGACC) and 25% strenate highy to terminator seminator chamisator (Englace) and 25% strenate highy to terminator seminator chamisator (Englace) and 25% strenate highy to the complete terminator seminator seminator seminator seminator seminator seminator seminator seminator seminato strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." Ø 99.09% 96.36% 97.12% 574.00 Gaps: Mismatches: Conservative: Matches: 514 106 3 238

Ş В Ş 밁 Ş

Score:

BASE COUNT

```
BQ564134
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          359 CCAACCACGGATATTGACTTCTTCTGTGAA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 534 bp mRNA linear EST 19-JUN-200: gilld01.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gilld01 5', mRNA sequence.

BQ564134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plate: 11 row: d column: 01 Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: kacharb@nidcd.nih.gov
Plate: 11 row: d column: 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ564134.1 GI:21467451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 534)
/dev_stage="male and female"
/clone_lib="Mouse Organ of Corti cDNA pBluescript; // note="Organ: Organ of Corti; Vector: pBluescript; The organ of Corti (OC) was fine dissected from a total of 386 OC as follows: 102 samples from post-natal (P) day 5; 72 from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10; 14 from P12 and 24 from P13. After killing animals by cervical dislocation followed by decapitation, the bulla was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcribes was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Sho I. The cDNA was sequentially size fractionated cover Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="gi11d01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear EST 19-JUN-2002
```

```
RESULT 5
BQ569741
LOCUS
                              VERSION
                                                          ACCESSION
                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-49 (1-110) x BQ564134 (1-534)
   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                       357
                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                            297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117
560 bp mRNA linear EST 19-JUN-2002 gil35f01.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gil35f01 5', mRNA sequence.
BQ569741
BQ569741.1 GI:21473058
                                                                                                                                                                                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AsnValLysClyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGlnAiaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The CDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XLI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's ExAssist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGJAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on M1 Tetrad thermal cyclers (M2 Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."

87 c 148 g 144 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.83e-71
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       106
106
0
```

멍 Ş

밁 Ş

Ś 밁 Ś B Ś 밁 Ś

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: kacharb@nidcd.nih.gov
Plate: 135 row: f column: 01
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Structural Cell Biology
National Institute of Deafness and other Communication Disorders $80/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev stage="post nattal day 5 to 13"
/dev stage="post nattal day 5 to 13"
/clone lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Gorgan: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Statagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237212), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker- primer and transcribed using
Moloney murine leukemia virus reverse transcriptase
(MMLV-RT) and 5-methyl dCTp. The second strand was
synthesized with DNA polymerase and RNase H. Complementary
DNA was blunt ended with Fu DNA polymerase, ligated with
he presence of ligated and directed
resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGGAAACAGCTATGACC) and 25%
                                                                                                                                                                                                                                                                                                                                                                     ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Spay00 (Pharmacia Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp. respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagenid was packaged with Gigapak III Gold and, upon titration on XiI Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagne's ExAssist Interference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="gi135f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
```

```
US-10-019-455A-49 (1-110) x BQ569741 (1-560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ564944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360 CCAACCACGGATATTGACTTCTTCTGTGAA 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 GGAGAGTTTTTGGGCAGTGTTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            608 bp mRNA linear EST 19-JUN-200 gi27g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi27g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                          National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                   Contact: Kachar, B.
Structural Cell Biology
                                                                                                                                                                                                                                                               Kachar,B.
EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 608)
                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ564944.1 GI:21468261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrIysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                160
                                                         301-402-1599
301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     strength BigDye terminator sequencing chemistry (Applied Biosystems, Poster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POPS polymer (Applied Biosystems, Foster City, CA).

The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                         Ö,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ø
                               kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                       hearing
row: g column: 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         574.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.97e-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                       Mus.
```

S В S В S 밁 5 В

Pred. No.: Alignment Scores:

Matches: Length: ORIGIN

8

Ş

Score

밁

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: M13RP1 reverse primer (ABI).
        169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 to 13"
/dev_stage="Nost natal day 5 t
                                                                                                                                                       strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 aucomated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of
genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized BSTs and 20% are unidentified." 107 c 166 g 166 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="gi27g09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  strain="BALB/c"
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-49 (1-110) x BQ564944 (1-608)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     630 bp mRNA linear EST 19-JUN-2002 gi108g04.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA BQ568471
BQ568471.1 GI:21471788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                     Plate: 108 row: g column: 04
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 630)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301-402-1765
/sex="male and female"
/dev_stage="Post natal day 5 to 13"
/clome_lbe="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13. After killing animals by
cervical dislocation followed by decapitation, the bulla
                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol type="mRNA"
                                                                                                                                                                                                                               /db_xref="taxon:10090"
/clone="gi108g04"
                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                             strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                       _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               00 H W
```

178 (catalog # Kib3-02; Invitrogen, Carlabad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 up mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was synthesized with DNA polymerase and RNAse H. Complementary DNA was blunt ended with Ffu DNA polymerase. Ilgated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNA was sequentially size fractionated to the Uni-Zap Xx vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XII Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference to secue plasmid DNA from the phages. Upon plating of the rescue plasmid purification kit (Invitrogen, Carlabad, CA) as instructed by the manufacturer ESTs from the Signer Carlabad, CA) as instructed by the manufacturer. ESTs from the south the converse primer (CAGGAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POF5 polymer (Applied Biosytems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified." was removed and opened in Leibowitz medium. The bony capsule of the cochlea was chipped away, stria vascularis and spiral ligament were removed and the sensory epithelium was carefully dissected out of the modiolus. Total RNA was extracted using the micro Fasttrack kit

Ś 밁 Ş US-10-019-455A-49 (1-110) x BQ568471 (1-630) Percent Similarity: Best Local Similarity: Query Match: . No.: 127 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20 CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 126 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40 2.34e-71 574.00 99.09% 96.36% 97.12% Matches: Conservative: Length:

186

BASE COUNT

Ş

밁 Ş 밁 Ş

밁

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ563768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          247 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      187 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            684 bp mRNA linear EST 19-JUN-200. gi06c09.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi06c09 5', mRNA sequence. BQ563768 BQ563768 BC563768.1 GI:21466749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Structural Cell Biology
National Institute of Deafness and other Communication Disorders
50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 684)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plate: 06 row: c column: 09
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        onset of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Kachar,B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="male and female"
/dev stage="Post natal day 5 to 13"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/clone_lib="Mouse Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; The
/note="Organ: Organ of Corti; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: pBluescript; Vector: 
                           Total RNA was extracted using the micro Fasttrack kit (catalog # K1593-02; Invitrogen, Carlsbad, CA), according to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First stranscribed using Moloney murile leukemia virus reverse transcribed using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hearing
(MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
/clone="gi06c09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ᄓ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
```

COMMENT

TITLE

SOURCE

JERSION

194 synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with PFu DNA polymerase, ligated with EcoR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with Gigapak III Gold and, upon titration on XLI Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's EXASSIST Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal Ml3 reverse primer (CAGGAAACACTATGACC) and 25% the concert96 (TM) plasmid purification of the manufacturer. strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."

(1-110) x BQ563768 (1-684)

Gaps: Indels: Mismatches: Conservative:

99.09% 96.36% 97.12% 2.63e-71 574.00

Length: Matches:

δ	44	HisGlyMetPheMetAspLysLeu	SerSerLys	TysLeuCy	'sAlaAspG	luGlu	1CysVal	20
90	67	CATGGTGTATTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC	TCTTCTAAG	AAGTTGTG	TGCGGATG	AGGAC	FIGIGIC	126
δλ	21	TyrThrIleSerLeuAlaArgAla	aGlnGluAsp	TyrAsnAl	aProAspC	ysArc	PheIle	40
ď	127	TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC	1 CAGGAAGAT	TACAATGO	CCCAGACT	STAGO	FICATO	186
Ωγ	41	AsnValLysLysGlyGlnGlnIle	eTyrValTyr	SerLysLe	uValThrG	luAsr	1G1yA1a	60
В	187	GATGTCAAGAAAGGGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT	TATGTTTAC	TCCAAGCT	GGTAACAG	AAAAC	GGAGCT	246
Ωy	61	GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly	LTyrGlyAsp	HisGlnAs 	pGluMetG	lyIle		80
Db	247	GGAGAGTTTTGGGCTGGCAGTGTT	TATEGTEAC	CACCAGGA	TGAGATGG	GAATT	GTAGGT	306
γ	81	TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle	gGluGlnAro	ValTyrGl	nGluAlaTi	hrLye		100
Db	307	TATTTCCCCAGCAACTTGGTGAAC	GAGCAGCGT	GTATACCA	GGAGGCCA	CCAAC	GAGATC	366
δ	101	ProThrThrAspIleAspPhePheCysGlu	eCysGlu 110	0				
B	367	CCAACCACGGATATTGACTTCTTCTGTGAA	TGTGAA 396	O				
RESULT 9 BB611549 LOCUS	H H	BB611549 6	696 bp	mRNA	linear	EST	EST 31-AUG-2001	2001

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Yamanaka, I., Kiyosawa,H., Kondo,S., Saito,T., Shinagawa,A., Aizawa,K., Fukuda,S., Hara,A., Itch,M., Kawai,J., Shibata,K., Arakawa,T., Ishi,Y. and Hayashizakk,Y.
Mapping of 1903 mouse cDNAs on mouse chromosomes. J. Struct. Func. Genomics 2 pre, L72-L86 (2001
Please visit our web site (http://genome.gsc.riken.go.jp) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: genome-res@gc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,
,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. . 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arakawa,T., Carninci,P., Fukuda,S., Furuno,M., Hanagaki,T., Hara,A., Hiramoto,K., Hori,F., Ishi,Y., Ito,M., Kawai,J., Konno,H., Kouda,M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,K., Ohno,M., Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki,D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H., Tagawa,A., Takahashi,F., Takeda,Y., Tanaka,T., Toya,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequencing pipeline with 384 multicapillary sequencer. Genome Res. . 10 (11), 1757-1771 (2000)

Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara, Y. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Muramatsu,M. and Hayashizaki,Y.
RIKEN Mouse ESTs (Arakawa,T., et al. 2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BB611549.1 GI:15393547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BB611549 RIKEN full-length enriched, 13 days embryo head Mus musculus cDNA clone 3110083012 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e mouse tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIKEN integrated sequence analysis (RISA) system--384-format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mmalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. (bases 1 to 696)
                                                                                                     /note="Site_1: XhoI; Site_2: SstI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken
              prepared by using trehalose thermo-activated reverse
                                                                                                                                                                                                                                                                                                         /dev_stage="13 days embryo"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                /mol_type= ..........10090"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                             tissue_type="head"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                            clone_lib="RIKEN full-length enriched, 13 days embryo
                                                                                                                                                                                                                                                                                                                                JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
BQ565637
LOCUS
                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
```

```
US-10-019-455A-49 (1-110) x BB611549 (1-696)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318 TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    198 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                          Structural Cell Biology
National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gi42g03.yl Mouse Organ of Corti cDNA pBluescript Mus clone gi42g03 5', mRNA sequence.
BQ565637
                                                                  Plate: 42 row: g column: 03
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                       Email: kacharb@nidcd.nih.gov
                                                                                                                                                   Tel: 301-402-1599
Fax: 301-402-1765
                                                                                                                                                                                                                                                                         Contact: Kachar, B.
                                                                                                                                                                                                                                                                                                                         onset of hearing
                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                           EST analysis of gene expression in the mouse Organ
                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ565637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ565637.1 GI:21468954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC 137
                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 474)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
organism="Mus musculus"
                            . .474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           was cleaved with XhoI and SstI." 122 c 176 g 194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        574.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.7e-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      696
106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                   Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       musculus cDNA
```

_type="mRNA"

```
Percent Similarity:
Best Local Similarity:
                                Query Match:
                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                              145 a
                                                                                                                                                                                                                                         /*sex*male and temate // devy stage="bost natal day 5 to 13" // devy stage="bost natal day 5 to 13" // devy stage="bost natal day 5 to 13" // devy stage="bost natal (p) day 5; 72 from per form of Corti (OC) was fine dissected from a total of 386 OC as follows: 102 samples from post-natal (p) day 5; 72 from per 60 from pr; 46 from per 18 from per 20 from pl0; 14 from pl2 and 24 from pl3 after killing animals by cervical dislocation followed by decapitation, the bhila was removed and opened in Lesbowiz medium. The bony capital per 19 from per 20 from pl0; 14 from pl2 and 24 from pl3 after killing animals by cervical dislocation followed by decapitation, the bhila was removed and the sensory control of the modiolus. Total RNA was extracted using the micro Fastrack kit (catalog # 23721) according to manufacturer's instructions. Reverse transcription and 11brary construction were carried out with the Uni-2ap XR vector kit (catalog # 23721). Stratagene) and Uni-2ap XR vector kit (catalog # 23721). Stratagene) and Uni-2ap XR vector kit (catalog # 23721). Stratagene) and Uni-2ap XR vector kit (catalog # 23721). Stratagene) and Uni-2ap XR vector kit (catalog # 23721). Stratagene) and Uni-2ap XR vector kit (catalog # 23721). Stratagene / day for that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using the form Stratagene / day hybrid oligo(d7) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker-primer and transcribed using wolloney murine leukenia vitus reverse transcribed using (MMLV-RP) and 5-methyl dCTP. The second strand was synthesized with Natural strand was sequentially size fractionated of the Uni-2ap XR vector, which have primer than 400ps and 1000 bp of the Uni-2ap XR vector, which had been predigsted with Gigapak in the plage (DNA polymerase and MNBs and digsted to the plage library was estimated to be 11,100,000 primer and first the plage (DNA charagene) and the plage library was estimated to be 11,100,000 primer and f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
/clone="gi42g03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       strain="BALB/c"
569.00
98.18%
95.45%
96.28%
                                                                                                                                               7.98e-71
                                                     Conservative: Mismatches:
                          Indels:
                                                                                                                 Matches:
                                                                                                                                         Length:
```

Score:

Pred. No.:

```
RESULT 11
BQ566932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-49 (1-110) x BQ565637 (1-474)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ566932 409 bp mRNA linear EST 19-JUN-200. gi73g09.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi73g09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institute of Deafness and other Communication Disorders 50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA Tel: 301-402-1599 Fax: 301-402-1765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Structural Cell Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ566932.1 GI:21470249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGGTGTATTTATGGATAAACTTTCTTCTAATAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    te: 73 row: g column: 09
primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 409)
                    /dev stage="Post natal day 5 to 13"
//dev stage="Post natal day 5 to 13"
//clone lib="Mouse Organ of Corti; Vector: pBluescript"
//note="Organ: Organ of Corti; Vector: pBluescript; The
//note="Organ: Organ of Corti; Vector: pBluescript; The
//organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from p12 and 24 from P13. After killing animals by
//organ p12 and 24 from P13. After killing animals by
//cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modicius.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            kacharb@nidcd.nih.gov
Total RNA was extracted using the micro Fasttrack kit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                           /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
/clone="gi73g09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247
```

```
US-10-019-455A-49 (1-110) x BQ566932 (1-409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                       141 CTATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCAT
60 aGlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGl 80
                                                                                                                                                                                         40 eAsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAl 60
                                                                                                                                                                                                                                                                                                                                             20 lTyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIl 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAla-AspGluGluCysVa 20
                                                                                                                                                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Number 1. And Selectify to C.F. Life Become by Land was synthesized with DNA polymerase and RNase H. Complementary DNA was blunt ended with Pfu DNA polymerase, ligated with ECOR I adapters in the presence of ligase and digested with Xho I. The cDNA was sequentially size fractionated over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden) and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with Gigapak III Gold and, upon titration on XL1 Blue MRF' cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the CONGERTYS (TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTs from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGAAAAGCCTATGACC) and 25% strength Bigbye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing of the library is as follows: 72% of genes have (Applied Biosystems, Foster City, CA). As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to manufacturer's instructions. Reverse transcription and library construction were carried out with the Uni-Zap XR vector kit (catalog # 237211, Stratagene) and Uni-Zap XR Gigapack III Gold Cloning kit (catalog # 237612), both from Stratagene (La Jolla, CA, USA), according to manufacturer's instructions. Briefly: 1.5 ug mRNA was reverse transcribed using a hybrid oligo(dT) linker-primer that contains an Xho I site. First strand synthesis was primed with the linker- primer and transcribed using Moloney murine leukemia virus reverse transcriptase (MMLV-RT) and 5-methyl dCTP. The second strand was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (catalog # K1593-02; Invitrogen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       548.00
97.27%
94.55%
92.72%
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.45e-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carlsbad, CA), according
                                                                                                                                                                                                                                                                       200
                                                                                                                   260
```

S

Ś 밁 Ş 밁 Ś

Pred. No.:

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ565411 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 eProThrThrAspIleAspPhePheCys 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   381 CCCAACCACGCTATTGACTTCTTCTGT 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     321 TTATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80 yTyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ565411 490 bp mRNA linear EST 19-JUN-200 gi37b12.y1 Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi37b12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Structural Cell Biology
National Institute of De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 37 row: b column: 12
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Kachar, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST analysis of gene expression in the mouse Organ of Corti at the onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ565411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 301-402-1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ565411.1 GI:21468728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 490)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301-402-1765
/dev_stage="male and remale"
/clone_lib="Mouse Organ of Corti cDNA pBluescript"
/note="Organ: Organ of Corti; Vector: pBluescript; The
organ of Corti (OC) was fine dissected from a total of 386
OC as follows: 102 samples from post-natal (P) day 5; 72
from P6; 60 from P7; 46 from P8; 18 from P9; 20 from P10;
14 from P12 and 24 from P13, After killing animals by
cervical dislocation followed by decapitation, the bulla
was removed and opened in Leibowitz medium. The bony
capsule of the cochlea was chipped away, stria vascularis
and spiral ligament were removed and the sensory
epithelium was carefully dissected out of the modiolus.
Total RNA was extracted using the micro Fasttrack kit
(catalog # K1593-02; Invitrogen, Carlsbad, CA), according
to manufacturer's instructions. Reverse transcription and
library construction were carried out with the Uni-Zap XR
vector kit (catalog # 237211, Stratagene) and Uni-Zap XR
Gigapack III Gold Cloning kit (catalog # 237612), both
from Stratagene (La Jolla, CA, USA), according to
manufacturer's instructions. Briefly: 1.5 ug mRNA was
reverse transcribed using a hybrid oligo(dT) linker-primer
that contains an Xho I site. First strand synthesis was
primed with the linker-primer and transcribed using
Moloney murine leukemia virus reverse transcriptase
(MMLV-RT) and 5-methyl dCTP. The second strand was
synthesized with DNA polymerase and RNase H. Complementary
DNA was blunt ended with pfu DNA polymerase, ligated with
EcoR I adapters in the presence of ligase and digested
with Xho I. The cDNA was sequentially size fractionated
over Pharmacia Size Sep400 (Pharmacia, Uppsala, Sweden)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone="gi37b12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Deafness and other Communication Disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear EST 19-JUN-2002
```

```
RESULT 13
BQ567343
   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-019-455A-49 (1-110) x BQ565411 (1-490)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NO:
                                                                                                                                                                                                                                                                   441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141 CATGGGGTATTTATGGATAAACTTTCTTCTAAAAAATTGTGTGCGGATAAGGAGTGTGTC 200
                                                                                                                                                                                                                                                                                                                                 101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      321 GGAAAGTTTTGGGCTGGCAGTGTTTATGGGGACCACCAGGATGAAATGGGAATTGTAGGT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            261 GATGTCAAAAAAGGGCAGCAAATCTATGTTTACTCCAAGCTGGTAACAAAAAAACGGAGCT 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201 TATACTATTTCTCTGGCAAGAGCACAGGAAAATTACAATGCCCCAAACTGTAGGTTCATC 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                              BQ567343 604 bp mRNA linear EST 19-JUN-200 gi88d08.yl Mouse Organ of Corti cDNA pBluescript Mus musculus cDNA clone gi88d08 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
BQ567343
BQ567343.1 GI:21470660
                                                                                                                                                                                                                                                                      CCAACCACGGATATTGACTTCTTCTGGGAA 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCACCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Clontech Chroma Spin-1000 (Clontech, Palo Alto, CA) columns to enrich for cDNAs greater than 400bp and 1000 bp, respectively. The cDNA was then directionally ligated to the Uni-ZAP XR vector, which had been predigested with EcoR I and Xho I. The phagemid was packaged with Gigapak III Gold and, upon titration on XII Blue MRF cells, the yield of the phage library was estimated to be 11,100,000 recombinants. Stratagene's Exassist Interference resistance helper phage (catalogue # 211203) was adopted to rescue plasmid DNA from the phages. Upon plating of the rescued library, individual cDNA clones were selected and grown in 96-well, 2 ml growth plate. Plasmid DNA was purified from 200 ul of saturated culture with the Concert96(TM) plasmid purification kit (Invitrogen, Carlsbad, CA) as instructed by the manufacturer. ESTE from the 5' end of the cDNA clones were generated with the universal M13 reverse primer (CAGJAAACAGCTATGACC) and 25% strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2; 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have assigned function; 12% are uncharacterized ESTE and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.05e-67
542.00
98.18%
90.91%
91.71%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                   linear
                                                                                                                                   EST 19-JUN-2002
```

ş

Ş 밁 S Ş

밁 Ś 밁 Ś 밁

B

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Kachar,B.
Structural Cell Biology
Structural Institute of Deafness and other Communication Disorders
S0/4249 South Drive, NIH, Bethesda, MD 20892-8027, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plate: 88 row: d column: 08
Seq primer: M13RP1 reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       onset of hearing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: kacharb@nidcd.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST analysis of gene expression in the mouse Organ of Corti at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kachar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301-402-1599
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 to 13"
/dev stage="Post natal day 5 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="gi88d08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              type="mRNA
```

```
US-10-019-455A-49 (1-110) x BQ567343 (1-604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D. P., Bult, C., Hume, D. A., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Beisel, K.W., Blake, J. A., Bradt, D., Brusic, V., Chothia, C., Corbani, L. E., Cousins, S., Dalla, E., Dragani, T. A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gaasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I. J., Jarvis, E. D., Kanat, A., Kawaji, H., Kawasawa, Y., Kedzierski, R. M., King, B. L., Konagaya, A., Kurochkin, I. V., Lee, Y., Lenhard, B., Lyons, P. A., Maglott, D. R., Maltais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W. J., Perea, G., Pescole, G., Petrovsky, N., Pillai, R., Pontius, J.U., Qi, D., Ranachandran, S., Ravasi, T., Reed, J. C., Reed, D. J., Reid, J., Ring, B. Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C. A., Setou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11 LysLysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArgAlaGlnGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY232622 RIKEN full-length enriched, adult inner ear Mus musculus cDNA clone F930026J20 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 365)
Okazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BY232622.1 GI:26413732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuValArgGluGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGAAGTTGTGTGCGGATGAGGAGTGTGTCTATACTATTTCTCTGGCAAGAGCACAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGTGTATACCAGGAGGCCACCAAGGAGATCCCAACCACGGATATTGACTTCTTCTGTGAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTACAATGCCCCAGACTGTAGGTTCATCGATGTCAAGAAAGGGCAGCAGATCTATGTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAlaGlySerValTyrGly 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACTCCAAGCTGGTAACAGAAAACGGAGCTGGAGAGTTTTGGGCTGGCAGTGTTTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strength BigDye terminator sequencing chemistry (Applied Biosystems, Foster City, CA). Sequencing reactions were performed on MJ Tetrad thermal cyclers (MJ Research, Waltham, MA), and analyzed on 3700 automated capillary sequencers using POP5 polymer (Applied Biosystems, Foster City, CA). The frequency distribution of the library is as follows: 72% of genes have 1 copy; 14.3% 2, 12% 3-10; 1.4% 11-50 and 0.1% 51-150. As to gene function, 45% of genes are present in GenBank and have know function; 23% have hits in GenBank, but do not have assigned function; 12% are uncharacterized ESTs and 20% are unidentified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.21e-64
525.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88.83%
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      365 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 10-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kondo, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
```

Ş

Ś 밁 Š ORIGIN BASE COUNT

Pred. No.:

밁

REFERENCE AUTHORS

US-10-019-455A-49 (1-110) x BY232622 (1-365)

SOURCE ORGANISM

KEYWORDS

ACCESSION DEFINITION

RESULT 14 BY232622 LOCUS

á 밁 Ś В

밁

```
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                Percent Similarity:
                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,M., Shimada,K., Sultana,R., Takenaka,Y., Taylor,M.S., Teasdale,R.D., Tomita,M., Verardo,R., Wagner,L., Wahlestedt,C., Wang,Y., Watanabe,Y., Wells,C., Wilming,L.G., Wynshaw-Boris,A., Yanagisawa,M., Yang,I., Yang,L., Yuan,Z., Zavolan,M., Zhu,Y., Zimmer,A., Carninci,P., Hayatsu,N., Hirozane-Kishikawa,T., Konno,H., Nakamura,M., Sakazume,N., Sato,K., Shiraki,T., Waki,K., Kawai,J., Aizawa,K., Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itch,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prepare mouse tissues.

Tissues were provided by Kirk W. Beisel (Boys Town National Tissues were provided by Kirk W. Beisel (Chaha, NE 68131 USA) whose Research Hospital 555 North 30th Street Omaha, NE 68131 USA) whose assistance we gratefully acknowledge. Please visit our web site (http://genome.gsc.riken.go.jp) for further details.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: genome-res@gsc.riken.go.jp,
MRL:http://genome.gsc.riken.go.jp/
Alzawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hirozane
,T., Imotani,K., Ishi,Y., Itoh,M., Kawai,J., Konno,H., Miyazaki,A.,
Murata,M., Nakamura,M., Nomura,K., Numazaki,R., Ohno,M., Sakai,K.,
,Sakazume,N., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami
,M., Waki,K., Watahiki,A., Muramatsu,M. and Hayashizaki,Y. Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12466851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The Institute of Physical and Chemical Research (RIKEN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                             /clone 1\bar{1}b="RIKEN full-length enriched, adult inner ear" 6\bar{0} c 110 g 98 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="inner ear"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone="F930026J20"
   483.00
97.92%
94.79%
81.73%
                                                                                                                                                                               1.06e-58
                                                                                                                                                                                                                                                                                                                         110 g
Indels:
Gaps:
                                                                          Mismatches:
                                                                                                            Conservative:
```

```
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                      Alignment Scores:
                                                                    ORIGIN
                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE236443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    258 GGAGAGTTTGGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            138 TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BE236443 527 bp mRNA linear 144645 MARC 4BOV Bos taurus cDNA 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith,T.P.L., Grosse,W.M., Freking,B.A., Roberts,A.J., Stone,R.T., Casas,E., Wray,J.E., White,J., Cho,J., Fahrenkrug,S.C., Bennett,G.L., Heaton,M.P., Laegreid,W.W., Rohrer,G.A., Chitko-McKown,C.G., Pertea,G., Holt,I., Karamycheva,S., Liang,F., Quackenbush,J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE236443.1 GI:9021161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE236443
                                                                                                                                                                                                                                                                                                                                           BACKWARD: GTTTTCCCAGTCACGACG
Plate: 54 row: C column: 18
Seq primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                             FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                               PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                     and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11282978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence evaluation of four pooled-tissue normalized bovine cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               libraries and construction of a gene index for cattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAla 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrThrIleSerLeuAlaArgAlaGinGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCC 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 527)
                                                                                        173
                                                                                        מ
                                                                                                       /tissue_type="pooled"
/lab_host="DHIOB"
/clone_lib="MARC 4BOV"
/clone="vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
Library made from pooled tissue from day 20 and day 40 embryos."
                                                                                                                                                                                                                                                     /organism="Bos taurus"
/mol_type="mRNA"
                                                                                                                                                                                                                                     /db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
    1.83e-52
                                                                                        94 C
                                                                                      126 g
Length:
                                                                                        134 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
    527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                      Ś
                         Ş
                                                                   밁
                                                                                                  S
                                                                                                                                        밁
                                                                                                                                                                     Ş
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
밁
                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-49 (1-110) x BE236443 (1-527)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
350 GTTCCTACCACGGATATTGACTTTTTCTGCGAG 382
                         100 IleProThrThrAspIleAspPhePheCysGlu 110
                                                                   290 GGTTATTTTCCCAGCAACTTGGTCCAGGAACAACATGTGTACCAAGAAGCCACCAAGGAA 349
                                                                                                                                        251 -----
                                                                                                                                                                                                               209 AACGTTAAAAAAGGACAGTGGATCTATGTTTACTCAAAGCTG---
                                                                                                                                                                                                                                                                                  149 TATACTATTTCTCTGGCCAGAGCTCAAGAAGATTACAATGCTCCGGACTGTAGATTCATT
                                                                                       80 GlyTyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGlu 99
                                                                                                                                                                                                                                 41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                       61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHis---GlnAspGluMetGlyIleVal
                                                                                                                                                                                                                                                                                                        21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                        89 CATGGAATATTTATGGACAGACTTGGTTCCAAGAAGCTGTGTGCAGATGATGAATGTGTC 148
                                                                                                                                                                                                                                                                                                                                                                            1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              441.00
82:88%
76.58%
74.62%
                                                                                                                                          -----GTCTATGGCAATCAGTCTGAGGATGAAATGGGAACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24578
                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                            79
                                                                                                                                            289
                                                                                                                                                                                                                                                                                    208
```

Search completed: December 29, 2003, 22:00:54 Job time: 1140.05 secs

```
-Q=/cgn2_1/USPTO_spco1/US10019455/runat_29122003_160347_230/app_query.fasta_1.1770
-DB=N Geneseq_193un03 -QFMT=fastap_-SUFFIX=rung_-MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER_US10019455 @CGN 1 1 0 @runat 2912203 160347 230 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -MAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMECUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Command line parameters:
-MODEL=frame+_p2n.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N_Geneseq_19Jun03:*
1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-49
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               December 29, 2003, 16:10:49; Search time 132.647 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2552756 segs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                  /SIDSi/gcgdata/geneseq/geneseqn-embl/NA1989.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1993.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1994.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1996.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1997.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1998.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:
/SIDSi/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:*/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001A.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA20012.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2003.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -DEV=xlh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2238.558 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (without alignments)
```

and is derived by analysis of the total score distribution.

SUMMARIES

Result ö.

Score

Match Length DB

텀

Description

Grend

																						O	ი			O	ი																			!
5	,£				4	40	9	38	37	36	S	4.	ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	ø	œ	7	σ	ຫ	4.	w	N	_	
215	C T 2	21.0) N	, ,) I	2 1	215	215	215	215	215	215	215	215	215	215	215	22.	44.	62.	64.	64.	64.	64.	264.5	65.	65.	458	515	541	541	541	541	541	541	541	541	541	541	541	574	574	574	591		
36.4	4.0		٠.	١.		٠.	7	σ.	36.4	36.4	9	٠		9	36.4	36.4	36.4		۲	4.	44.8	4	4	4.	44.8	4.	44.9	.7	.7	Ľ	ŗ	91.5		⊢	⊢	Ľ	٠	۲		ŗ	7.	97.1	97.1		100.0	1 1 1 1 1 1 1
1061	1000	1000	1000	9 6	1000	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060	1060	305	581	433	555	459	459	459	330	442	442	261	307	1201	923	891	891	521	521	521	426	387	384	330	947	384	330	384	330	
22	Ü) () (, (1 (א נ	у (2	25	25	25	25	25	25	24	24	24	22	16	16	22	23	22	22	16	16	24	24	22	22	22	22	22	22	24	24	24	22	24	22	22	22	22	22	22	22	1
AAS46205	Togo	200	ABA / DBZ L	0 0	0 0	2 1	262	œ	ABX98433	ACA63455	044	688	796	ABL88249	957	ABS74460	92	8405	ū	778	ABV59229	AAD18732	700B	8405	AAQ84061	ABL64012	σ	909	φ	634	908	2634	822	ABK33571	825	574	2634	AAS17583	AAF59065	AAF59079	AAF59084	AAF59068	AAF59080	5909	AAF59099	
Human DNA encoding	Human CUNA encoun	n PRO porynuc	CUNA	EXO POLYMON	rac polymuc		n secreted/tr	human	Human cDNA encodin	cDNA encoding huma	Novel human secret	cDNA encoding huma	Human PRO19670 cDN	Human PRO19670 cDN	-	cDNA encod	n PRO19670 cD	fied	enc	binant huma	prostate	Human antisense ol		equence encoc	ce encodin	ast cancer re	ast c	ML P	LP nucleotid	12	MLP nuc	growth	n EST-deri	encoding	PRO9873 CDN	angiogenesi		ncoding	MLP nuc	MLP nuc	Mouse MLP nucleoti	Mouse MLP nucleoti	Mouse MLP nucleoti	t MLP nucleotid	Rat MLP nucleotide	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

ALIGNMENTS

AAF59099 standard; DNA; 330 BP

23-APR-2001 (first entry)

Rat MLP nucleotide sequence SEQ ID NO:48.

RESULT 1
AAF90099
ID AAF5
XX AAF5
AC AAF5
XX AAF5
XX AAF5
XX AAF5
XX AAF5
XX BA AAF5
XX AAF5
XX BA AAF5
XX AAF5
XX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF5
AX AAF MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor;

Rattus sp

Pred. No.

greater

is the number of results predicted by chance to have a ster than or equal to the score of the result being printed,

```
밁
                                                                                      Ś
                                                                                                                    밁
                                                                                                                                                Ś
                                                                                                                                                                                 밁
                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-49 (1-110) x AAF59099 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAFS 9063 to AAFS 909 and AABS 9122 to AABS 9132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 12; Page 107; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUN-2000; 2000WO-JP04278
AAF59098 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001-159271/16
                                                                                         101
                                                                                                                        241
                                                                                                                                                                                   181
                                                                                                                                                                                                                                                121
                                                           301
                                                                                                                                                   81
                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                        1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB69131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nishi K,
                                                                                                                                                                                                                                                                   AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                      ProThrThrAspIleAspPhePheCysGlu
                                                                                                                        TATTTCCCCAGCAACTTGGTTAGAGAGCAACGAGTGTACCAGGAGGCCACCAAGGAGATT
                                                                                                                                        TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluTle 100
                                                                                                                                                                                    GGGGCATTCTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGGAATTGTGGGGT
                                                                                                                                                                                                      GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                           TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                        CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        330 BP; 91 A; 62 C; 91 G; 86 T; 0 other;
                                                            CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              591.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.71e-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                110
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    χ,
                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                                                                                                                                        60
```

```
8
                           Ś
                                                              밁
                                                                                          Ś
                                                                                                                           밁
                                                                                                                                                       Ś
                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                     US-10-019-455A-49 (1-110) x AAF59098 (1-384)
                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 384 BP; 98 A; 72 C; 109 G; 105 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 13; Page 105-106; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB; AAB69130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rat MLP nucleotide sequence SEQ ID NO:46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                               the exemplification of the present invention.
                                                              175
                                                                                                                           115 TATACCATTTCTCTGGCAAGAGCACAGGAAGACTACAATGCCCCGGACTGTAGGTTCATC
                               61
                                                                                            41
                                                                                                                                                        21
                                                                                                                                                                                        55
                                                                                                                                                                                                                  1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                  GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                            AATGTCAAGAAAGGGCAGCAGATCTATGTTTATTCCAAGCTGGTAACAGAAAATGGAGCT
                                                                                  AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                           TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                        CATGGCATGTTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCAGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99JP-0186718
                                                                                                                                                                                                                                                                                                 4.61e-77
591.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mogr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Noguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            joint
294
                               08
                                                              234
                                                                                             60
                                                                                                                             174
                                                                                                                                                          40
```

TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle

```
Percent Similarity:
Best Local Similarity:
Query Match:
S
                                      밁
                                                                         Ś
                                                                                                                 US-10-019-455A-49 (1-110) x AAF59080 (1-330)
                                                                                                                                                          B
                                                                                                                                                                                                                                                       Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                  RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                    The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                  Sequence 330 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mouse MLP nucleotide sequence SEQ ID NO:25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF59080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF59080 standard; DNA; 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 10; Page 98; 111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; AAB69127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            295
21
                                                                                                                                                                                                                                                                                                                                                        exemplification of the present invention.
                                                                    HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nishi K, Ogi K, Ohkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                        CATGGTGTATTTATGGATAAACTTTCTTCTAAGAAGTTGTGTGCGGATGAGGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-0186718.
                                                                                                                                                                                                                                                                                                                91 A; 60 C;
                                                                                                                                                          574.00
99.09%
96.36%
97.12%
22
                                                                                                                                                                                                                                                         1.15e-74
                                                                                                                                                                                                                                                                                                                  92
                                                                                                                                                                                                                                                                                                                  <u>ი</u>
                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                          Gaps:
                                                                                                                                                                                                                Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                  87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mogi s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Noguchi Y,
                                                                                                                                                        Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           joint
  40
                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            354
                                                                         RESULT 4
AAFSO
AAFSO
XX AAFS
XX AAFS
XX AAFS
XX MILP,
DI 23-P
XX MILP,
XX MILP,
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX MILP,
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX Inhin
XX I
Alignment Scores: Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                         Sequence 384 BP;
                                                                                                                                                                                                                                                                                                                                  diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB; AAB69125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF59068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nishi K,
                                                                         98 A; 68 C; 111
```

```
The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                             Claim 11; Page 93; 111pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse MLP nucleotide sequence SEQ ID NO:10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF59068 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GATGTCAAGAAAGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAACCACGGATATTGACTTCTTCTGTGAA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTCCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ogi ĸ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ohkubo s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                             joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
```

G; 107 T; 0

other;

Length: Matches:

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-49 (1-110) x AAF59068
                                                                                                                                                                                                                                                                                                                  MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter; inhibitor; ds.
                                                                           Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                 23-APR-2001 (first entry)
                                                                                                                           WPI; 2001-159271/16.
                                                                                                                                                                                                       30-JUN-1999;
                                                                                                                                                                                                                                                                        WO200102564-A1.
                                                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF59084 standard;
                                                                                                                                                                                                                             29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                          Mouse MLP nucleotide sequence SEQ ID NO:30
                                                                                                                                                                                 (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                 Ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                          Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAACCACGGATATTGACTTCTTCTGTGAA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCACCAAGGAGATC 354
                                            Page 100-101; lllpp; Japanese.
                                                                                                                                                                                                        99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99.09%
96.36%
97.12%
22
                                                                                                                                                         Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                               947
                                                                                                                                                          Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-384)
                                                                                                                                                          ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                          Mogi
                                                                                                                                                          ş
                                                                                                                                                          Noguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0010
                                                                                                                                                          Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234
```

The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell

WPI; 2001-159271/16

```
RESULT 6
AAF59079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ព្រះព្រះជន
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-49 (1-110) x AAF59084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of proteins and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenssis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                   MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 947 BP; 279 A; 158 C; 221 G; 289 T; 0 other;
                          Tanaka H;
                                    Itoh Y,
                                                                                       30-JUN-1999;
                                                                                                                29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                        Human MLP nucleotide sequence SEQ ID NO:23
                                                                                                                                                                                                                                                                                                                 23-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                        AAF59079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in the exemplification of the present invention.
                                                                                                                                                                     WO200102564-A1
                                                              (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                          365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125
                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                    Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                            CCAACCACGGATATTGACTTCTTCTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTTCCCCAGCAACTTGGTGAAGGAGCAGCGTGTATACCAGGAGGCCCACCAAGGAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGAGTTTTGGGCTGGCAGTGTTTATGGTGACCACCAGGATGAGATGGGAATTGTAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTCAAGAAAGGGCAGCAGATCTATGTTTACTCCAAGCTGGTAACAGAAAACGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATACTATTTCTCTGGCAAGAGCACAGGAAGATTACAATGCCCCAGACTGTAGGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ds.
                                                                                         99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.24e-74
574.00
99.09%
96.36%
97.12%
                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                    ogi K,
                                    Ohkubo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-947)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
Gaps:
                                   Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                            394
                                    Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              947
                                    Yoshimura
                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
```

```
Best Local Si
Query Match:
DB:
RRESULT 7
AAF59065
ID AAF5
XX AAF5
XX AAF5
XX AAF5
XX Huma
XX Huma
XX MILP,
XW join
XW card
XW inhi
XX inhi
XX Homo
OS Homo
XX WO20
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SXCCCCCCCXXXPTPTXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-49 (1-110) x AAF59079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                  Homo sapiens.
                                                                                               MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                       Human MLP nucleotide sequence SEQ ID NO:4.
                                                                                                                                                                                                                                              AAF59065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases well as pathologic angiogenesis. AAF59063 to AAF65909 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                          23-APR-2001
                                                                                                                                                                                                                                                                              AAF59065 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 330 BP; 91 A; 60 C; 91 G; 88 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 8; Page 97; lllpp; Japanese.
                                                                                    inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; AAB69126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
                                                                                                                                                                                                                                                                                                                                                                       ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HisGlyMetPheMetAspLysLeuSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                   CCCACCACGGATATTGACTTCTTCTGCGAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7.93e-70
                                                                                                                                                                                                                                                                              384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
```

WO200102564-A1

26-FEB-2002

(first

AAS17583

```
밁
                           Ś
                                                         문
                                                                                   Ś
                                                                                                                 밁
                                                                                                                                            S
                                                                                                                                                                           맑
                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-49 (1-110) x AAF59065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAF59063 to AAF59099 and AAB69122 to AAB69132 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 384 BP; 99 A; 70 C; 106 G; 109 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; Page 91; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-159271/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUN-2000; 2000WO-JP04278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the exemplification of the present invention.
   355
                              101
                                                           295
                                                                                                                   235
                                                                                                                                                                              175
                                                                                                                                                                                                                                    115 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                      81
                                                                                                                                              61
                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                    21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                           μ
                   ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                      GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                              HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
 CCCACCACGGATATTGACTTCTTCTGCGAG
                                                         TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                   GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                      AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle
                                                                                                                                                                           AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nishi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                    9.86e-70
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ohkubo
                                                                                                                                                                                                                                                                                                                                                        (1-384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mogi S,
384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Noguchi
                                                                                                                                                                                                                                                                                                                                                                                   98
7
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yoshimura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                joint
                                                                                    100
                                                                                                                 294
                                                                                                                                              80
                                                                                                                                                                           234
                                                                                                                                                                                                        60
                                                                                                                                                                                                                                    174
                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                              114
                                                                                                                                                                                                                                                                                                                           20
```

Ş 몽

3 Ş В Ş 밁 Ş 멼

```
Ś
                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                   밁
                                                                   US-10-019-455A-49 (1-110) x AAS17583
                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                              The invention relates to an isolated novel secreted polypeptide (I) and (II) are useful for treating cancer, color polymucleotide (II). (I) and (II) are useful for treating cancer, color autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders infections, infections, haematopoietic color color, inflammatory disorders, infections, neurological and color psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, and promabities and disorders caused by abnormal color creat diseases, abnormalities and disorders caused by abnormal color expression, production, function and/or metabolism of the genes, as coverening methods for detecting the effect of added compounds on the conduction of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polypeptides, and in tissue expression studies. The present sequence represents the color coding sequence of novel human secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antiinflammatory, neuroprotective; nephrotropic; cardiovascular; human; cancer; autoimmune disease; wound healing disorder; infection; haematopotetic disorder; inflammatory disorder; infertility; neurological disease; psychiatric disease; cardiovascular disease;
                                                                                                                                                                                                                                                  Sequence 387 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 2; Page 44; 92pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-APR-2000; 2000US-196603P.
24-APR-2000; 2000US-199417P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-APR-2001; 2001WO-US11797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          respiratory disease; renal; gastrointestinal; as.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding novel secreted protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Agarwal P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SMIK ) SMITHKLINE BEECHAM CORP
55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU09871.
              HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Murdoch PR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1..387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "Human secreted protein"
                                                                                                                                                                                                                                                     101 A; 70 C; 106 G; 110 T; 0
                                                                                                    9.97e-70
541.00
95.45%
89.09%
91.54%
24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rizvi SK,
                                                                      (1-387)
                                                                                                                                                                             Length:
Matches:
                                                                                                                                         Mismatches:
                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith RF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xiang
                                                                                                      387
98
7
0
                                 20
```

signature analysis, and Sanger sequencing techniques. This expressed sequence tag was used in the assembly of a full-length cDNA sequence (see AAH2634) encoding a novel human growth regulatory-like polypeptide (GRLP, see AAB82671). The GRLP belongs to the same protein family as growth regulatory proteins, growth factors, human melanoma derived growth regulatory protein precursor (64% similarity and 45% identity over 111 amino acids) or melanoma inhibitory activity, cattle cartilage-derived retinoic acid sensitive procein (CD-RAP, 44% identity and 64% similarity over 126 amino acids) and other retinoic acid-sensitiv

acid-sensitive

```
Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous syst.
The present sequence is that of Hyseq clone identification number 16372272, which was obtained from a human thymus cDNA library using standard pCR with primers specific for vector sequences flanking the inserts, sequencing by hybridisation sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                            Mize NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth regulatory-like polypeptide; human; cartilage; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-OCT-2001 (first entry)
                                                                                                                                                 Example 1; Page 114; 119pp; English
                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-483233/52
                                                                                                                                                                                                                                                                                                                                                                                                                 Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human growth regulatory-like polypeptide clone 16372272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAH26341 standard; cDNA; 426 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCACCACGGATATTGACTTCTTCTGCGAG 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                         Boyle BJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0491,404
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ford JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                         Arterburn MC,
                                                                                                                                                                                                                                     disorders, and nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ϋ́T,
                                                                                                                                                                                                                                                                                                                                                                                                                                            Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            234
```

និងឧខឧឧឧឧឧឧ

```
RESULT 10
ABL95740
ID ABL95740
XX ABL95
XX ABL95
XX ABL95
XX Human
XX Human
XX Human
XX Ather
XW ather
XW antia
XX Cardi
XX Cardi
XX O200
XX W0200
XX W0200
XX W0200
XX W09-JU
PR 25-JU
PR 25-JU
PR 25-JU
PR 25-JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-019-455A-49 (1-110) x AAH26341 (1-426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            can be used in the prophylaxis, treatment (including gene therapy) and disgnosis of disorders and diseases caused by, or involving, cartilage development and maintenance, inhibition of melanoma cell growth and tumours, including neuroectodermal tumours such as gliomas. The polynucleotides can also be used to design probes and primers, for chromosome and gene mapping, in the recombinant production of protein, in the generation of antisense, ribozyme and peptide-nucleic acid molecules, and to produce transgenic animals.
                                                                                                                                                                              Human, angiogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; gene; ss.
  20-JUL-2000; 2000US-219556P.
25-JUL-2000; 2000US-220624P.
25-JUL-2000; 2000US-220664P.
28-JUL-2000; 2000WO-US20710.
                                                                      09-JUL-2001; 2001WO-US21735.
                                                                                                  31-:TAN-2002
                                                                                                                            WO200208284-A2
                                                                                                                                                                                                                                                                                 19-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 426 BP; 119
                                                                                                                                                                                                                                                    Human angiogenesis related cDNA PRO9873
                                                                                                                                                                                                                                                                                                                                     ABL95740 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  313
                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                          ProThrThrAspIleAspPhePheCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGAATTTTGGGCTGGCAGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRLP polypeptides and polynucleotides of the invention
                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.14e-69
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; 73 C;
                                                                                                                                                                                                                                                                                                                                       521
                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     113 G; 120 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                            402
                                                                                                                                                                                                                                                    SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                       110
                                                                                                                                                                                                                                                    <u>8</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
7
8
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
Baker KP, Ferras Godowski PJ, Gurney AL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-DEC-2000;
20-DEC-2000;
20-DEC-2000;
22-JAN-2001;
28-FEB-2001;
28-FEB-2001;
01-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-OCT-2000;
08-NOV-2000;
08-NOV-2000;
10-NOV-2000;
        The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a coding sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-SEP-2000;
18-SEP-2000;
                                                                                                                                                           One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -
                                                                                                                                                                                                                                                                                                                                                                                                                    (GETH )
(BAKE/)
(FERR/)
(GERB/)
(GERR/)
(GODD/)
(GODO/)
(GOURN/)
                                                                                                                                      Claim 1; Fig 359; 567pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-MAR-2001;
05-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-AUG-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                                                                                                               (STEP/)
                                                                                                                                                                                                                                                                                                                                                                                                       (MARS/
                                                                                                                                                                                                                                                                                                                                                                            (PAON/
                                                                                                                                                                                                                                                                                                                                                                                          (PANJ/)
                                                                                                                                                                                                                       2002-171999/22.
)B; ABB95602.
                                                                                                                                                                                                                                                                                                                                 PAN J.
PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
                                                                                                                                                                                                                                                                                                                                                                                                    GODOWSKI P J.
GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                                                                                                                                      MOOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GODDARD A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GERRITSEN M E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FERRARA N.
                                                                                                                                                                                                                                                        Ferrara N, Gerrara N, Gurney AL, H
                                                                                                                                                                                                                                                                                                                      Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001WO-US17443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001US-0870574.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001US-0866034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001US-0854280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001US-0816744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001WO-US06520.
2001WO-US06666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001US-0796498.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001US-0767609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0747259.
2000WO-US34956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000WO-US30952
2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US17092.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001US-0828366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-242922P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0664610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-000000P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0643657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0709238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                              Gerber H, Gerrit
L, Hillan KJ, Ma
CK, Williams PM,
                                                                                                                                                                                                                                                                                      Gerritsen ME,
                                                                                                                                                                                                                                                               Marsters SA,
                                                                                                                                                                                                                                                                                         Goddard
                                                                                                                                                                                                                                                               Pan
Ye W;
                                                                                                                                                                                                                                                                           Ç
                                                                                                                                                                                                                                                                                           A
```

맑 S В Ś 밁 Ś 밁 Ş В 8 밁 Ś

```
RESULT 11
ABL88251
      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-49 (1-110) x ABL95740 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                              28-JUL-2000;
02-AUG-2000;
17-AUG-2000;
                                                                                                                                                                                                                                                                                            Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; prO agonist; prO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; rheumatoid arthritis; myocardial infarction; thrombophlebitis; lymphangitis; tunour angiogenesis; breast carcinoma; liver carcinoma; hymphangitis; chromosome mapping; gene mapping; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 521 BP;
                                                                                                                                                                       20-JUN-2001; 2001WO-US19692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABL88251 standard; cDNA; 521
                                                                                                                                        23-JUN-2000;
                                                                                                                                                                                                                                     WO200200690-A2
                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Human PRO9873 cDNA sequence SEQ ID NO:359.
                                                                                             25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÄACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle
                                                                             2000US-219556P.
2000US-220624P.
2000US-220664P.
2000WO-US20710.
                   2000WO-US23522.
2000WO-US23328.
                                                 2000US-0643657.
                                                                2000US-222695P
                                                                                                                                             2000US-213637P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.53e-69
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    521
98
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
 Ş
                                밁
                                                             Ś
                                                                                                                                                                                                                                                    US-10-019-455A-49 (1-110) x ABL88251
                                                                                                                                          Query Match:
                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-APR-2001;
10-MAY-2001;
10-MAY-2001;
25-MAY-2001;
25-MAY-2001;
                                                                                                                                                                                                                                                                            e.g. cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, anglina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour anglogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABL88259 to ABL88267 represent primers and probes used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                   antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polynucleotides, proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal,
                                                                                                                                                                                                                                                  Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 ABB85003. The PRO proteins and polymicleotides have cardiant, of the proteins and polymicleotides have cardiant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-090516/12.
P-PSDB; ABB84996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stephan JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-MAR-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2001
28-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                infarction), endothelial or angiogenic disorders in a mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GETH ) GENENTECH INC.
                              92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGGAGTGTGC 151
                                                                                                                                                        Similarity:
21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fig 359; 565pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ferrara N, G
J, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001US-0828366.
2001US-0854208.
2001US-0854280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001WO-US17443
2001WO-US17800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001WO-US17092.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001US-0866028.
2001US-0866034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001WO-US06666
2001US-0802706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001US-0870574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-0816744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001WO-US06520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001US-0796498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001US-0767609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US34956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0747259
                                                                                                                                      1.53e-69
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            č,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gerber H, Gerritsen ME, Goddard A;
L, Hillan KJ, Marsters SA, Pan J,
CK, Williams PM, Wood WI, Ye W;
                                                                                             (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerritsen ME, Go
KJ, Marsters SA,
                                                                                                                                        Mismatches:
Indels:
                                                                                                                        Gaps:
                                                                                                                                                                       Conservative:
                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Paoni NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cytostatic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                              20
```

```
RESULT 12
ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC ABAS3
AC AB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUL-2000;
23-AUG-2000;
24-AUG-2000;
                                                                                                                                                                                                                                                                                                     20-DEC-2000; 2000US-0747259.
20-DEC-2000; 2000WO-US34956.
28-FEB-2001; 2001WO-US06520.
10-MAY-2001; 2001US-0854280.
                                                                                                                                                                                                                                                                                                                                                                                                                     28-NOV-2000; 2000US-253646P.
01-DEC-2000; 2000WO-US32678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; secreted protein; PRO; tumour; lung cancer; colon cancer; breast cancer; prostate tumour; retal tumour; liver tumour; pericyte cell proliferation; chondrocyte cell proliferation; tumour necrosis factor-alpha; gene; ss.
                                                      P-PSDB; AAU83627
                                                                                      WPI; 2002-172001/22.
                                                                                                                                                                    Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-JUL-2000; 2000US-220607P.
25-JUL-2000; 2000US-220624P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUL-2000; 2000US-220585P.
25-JUL-2000; 2000US-220605P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-JUL-2000; 2000US-219556P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2001; 2001WO-US21066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200208288-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABK33571;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABK33571 standard; cDNA; 521
                                                                                                                                                                                                                             (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                       Desnoyers L,
C, Gurney AL,
                                                                                                                                                                                                                                                                                    2001WO-US17092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-000000P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000WO-US30873.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US23522.
2000WO-US23328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-220666P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-220893P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-220664P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-220638P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human PRO protein, Seq ID No 71.
                                                                                                                                    Gerritsen ME, Goddard A, Godowski Smith V, Stephan JF, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                    Godowski PJ;
                                                                                                                                       Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        211
```

One hundred and twenty two nucleic acids encoding PRO polypeptides

XXXXXXXXXXXXX

Human EST-derived coding sequence SEQ ID NO:

88

(first entry)

AAH98228 standard; cDNA; 891 BP.

Human; sheep; pig; cow; fruit fly; yeast; hamster; macaque; tomato; monkey; dog; sea urchin; expressed sequence tag; EST diagnostics; foremaic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition; ss.

```
useful for treating a PRO related disorder and for diagnosing tumours such as lung cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or liver tumour -
Claim 2; Figure 71; 359pp; English.
```

encode human secreted proteins. The PRO nucleic acids, polypeptides, agonists and antagonists are useful for treating a PRO related disorder. The PRO polypeptides are useful for diagnosing tumours, especially lung cancer, colon cancer, breast.tumour, prostate tumour, rectal tumour or liver tumour. The PRO polypeptides are useful for stimulating the proliferation of, or gene expression, in pericyte cells, for stimulating the proliferation or differentiation of chondrocyte cells, for stimulating stimulating or tumour necrosis factor-alpha from human blood, for stimulating or inhibiting the proliferation of normal human dermal fibroblast cells. The PRO polypeptide may also be used as molecular weight markers and for tissue typing. The PRO nucleic acids have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABK33536-ABK33657 represent human PRO PRO protein coding sequences of the invention. The invention relates to one hundred and twenty two nucleic acids encoding PRO polypeptides. The sequences of the 122 PRO polynucleotides

Sequence 521 BP; 167 A; 86 C; 131 G; 137 T; 0 other;

Alignment Scores: Pred. No.: Score: Percent Similarit Best Local Simila	Plignment Scores: Pred. No.: Score: Score: Percent Similarity: Rest Tocal Similarity:	1.53e-69 541.00 95.45%	Length: Matches: Conservative:	521 98 7
Query Match: DB:	ch:	91.54% 24	Indels: Gaps:	00
US-10-019	US-10-019-455A-49 (1-110) x ABK33571 (1-521)	0) x ABK33571	(1-521)	
Qγ	1 HisGlyMet	PheMetAspLysLe	euSerSerLysLysLeu	ysalaaspG
ממ	92 CATGGAATA	TTATGGACCGICI	CATGGAATATTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGTGTCT	GTGCAGATG
γQ	21 TyrThrile	SerLeuAlaArgAl	laGlnGluAspTyrAsn	laProAspCy
Дb	152 TATACTATT	TCTCTGGCTAGTGC	TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT	CCCCGGACTG
\$	41 AsnValLys	LysGlyGlnGlnIl	AsnValLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla	euValThrGl
DЪ	212 AACGTTAAA	AAAGGCAGCAGAT	AACGTTAAAAAAGGCCAGCAGCTCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT	TGGTAAAAGA
γQ	61 GlyAlaPhe	TrpAlaGlySerVa	GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly	spGluMetGl
DЬ	272 GGAGAATTT		GAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT	ACGAGATGGG
γQ	81 TyrPhePro	SerAsnLeuValAr	TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle	lnGluAlaTh
Db	332 TATTTCCCC	AGGAACTTGGTCAA	TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391	AGGAAGCTAC
γQ	101 ProThrThr	ProThrThrAspIleAspPhePheCysGlu 110	neCysGlu 110	
용	392 CCCACCACG	CCCACCACGATATTGACTTCTTCTGCGAG	CTGCGAG 421	

```
밁
                                                                                                                                                               맑
                                                                                                                                                                                      Ş
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                    ş
                        S
                                                      8
                                                                             Ś
                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                US-10-019-455A-49 (1-110) x AAH98228 (1-891)
                                                                                                                                                                                                                                                                                                                                                                                        Best Local
                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention provides the protein and coding sequences of novel proteins from a variety of organisms, including human, dog, cat, horse, cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (ESTs) from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess biodiversity and for nutritional purposes. The present sequence is a cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUL-2000; 2000US-0617746.
03-AUG-2000; 2000US-0631451.
15-SEP-2000; 2000US-0663870.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated polypeptide for treatment of diseases, diagnostics, raising antibodies and research use - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200154477-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAM23569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cao Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2001; 2001WO-US02687.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 891 BP; 272 A; 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-476164/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΥT,
                                                                                                                                                                193
373
                           101
                                                                                                          253
                                                                                                                                                                                                                       133
                                                                                                                                                                                                                                                                                                                                                                                        Similarity:
                                                                              82
                                                                                                                                     61
                                                                                                                                                                                          41
                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                            73
                                                                                                                                                                                                                                                                                                      <u>بــ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Liu C, Zl
Drmanac RA,
                                                                                                                           GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                   AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                        TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                       HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 236; 1275pp; English
                 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                           GGAGAATTTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 312
                                                                                                                                                                                                                                                                             CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 132
CCCACCACGGATATTGACTTCTTCTGCGAG
                                                      TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 372
                                                                    TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0491404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhou P,
A, Zhang
                                                                                                                                                                                                                                                                                                                                                           3.31e-69
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                        CTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qian XB, W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         214
                                                                                                                                                                                                                                                                                                                                                                           Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wang Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         259
 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chen R,
                                                                                                                                                                                                                                                                                                                                                              891
7
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Asundi V;
                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                  252
```

RESULT 14

Best Local Similarity: Query Match:

Percent Similarity:

3.31e-69 541.00 95.45% 89.09% 91.54%

Mismatches: Indels: Gaps:

Length: Matches: Conservative:

US-10-019-455A-49 (1-110) x AAH26342 (1-891)

```
Isolated human growth regulatory-like polypeptide useful for treating e.g. Alzheimer's disease, cancer, autoimmune disorders, hyperproliferative disorders, coagulation disorders, and nervous system
                                                                                                                                                                                                                                                                                  25-JAN-2000; 2000US-0491404
02-MAY-2000; 2000US-0563786
                                                                                                                                                                                                                                                                                                                                                                      Growth regulatory-like polypeptide; human; cartilage; melanoma; neuroectodermal tumour; glioma; cancer; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                           Human growth regulatory-like polypeptide partial cDNA clone.
                                                                                                                                                                                                                                                                                                                                                                                                          02-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                         AAH26342;
                                                                                                                                                                                                                                                                                                                                                                                                                                      AAH26342 standard; cDNA; 891
Sequence 891
                                                                                                                                                                               Claim 1; Page 115; 119pp; English.
                                                                                                                                                                                                                                 WPI; 2001-483233/52.
                                                                                                                                                                                                                                              Drmanac RT;
                                                                                                                                                                                                                                                      Mize NK,
                                                                                                                                                                                                                                                                                                       25-JAN-2001; 2001WO-US02455
                                                                                                                                                                                                                                                                                                                     02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                   WO200155332-A2
                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                     (HYSE-) HYSEQ INC.
              peptide-nucleic
                                                                                                                                                                                                                                                      Boyle BJ,
BP; 272 A; 146 C; 214 G; 259 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
              acid molecules, and to produce transgenic animals
                                                                                                                                                                                                                                                       Ford JE,
                                                                                                                                                                                                                                                       Arterburn
                                                                                                                                                                                                                                                       N
N
                                                                                                                                                                                                                                                       Tang
                                                                                                                                                                                                                                                       YT,
                                                                                                                                                                                                                                                       Liu
                                                                                                                                                                                                                                                       Ç
```

```
RESULT 15
AAF59083
ID AAF59
XX AAF59
XX AAF59
XX AAF59
XX MLP:
XW MLP:
XW Inhib
XW inhib
XW inhib
XW Cardii
XW Cardii
XW Cardii
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
XW Inhib
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                  The present invention describes novel MLP proteins and their encoding DNAs. The MLP proteins and DNAs have antiinflammatory and cardiant activities, and can be used in gene therapy and as secretory cell function regulators. The MLP proteins and DNAs can be used in drugs, in the diagnosis and development of promoters and inhibitors for preventing or treating bone and joint diseases as well as pathologic angiogenesis. AAP59063 to AAP59099 and AAB69122 to AAB69132 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                     Safe, low-toxicity secretory cell function-regulatory protein and encoded DNA, applicable as drugs, in diagnosis and development of promoters and inhibitors for preventing or treating e.g. bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MLP; MIA; melanoma inhibitory activity; cancer; bone disease; joint disease; pathologic angiogenesis; diagnosis; antiinflammatory; cardiant; gene therapy; secretory cell function regulator; promoter;
                                                                                                                                                                                                                                                                                                                                                                                 promoters
diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human MLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF59083
                                                                                                                                                                                                                                                                                                                         Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tanaka H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200102564-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF59083 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Itoh Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JUN-2000; 2000WO-JP04278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitor; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-159271/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nishi K, Ogi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACGTTAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCACCACGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleotide sequence SEQ ID NO:29.
                                                                                                                                                                                                                                                                                                                      Page 99-100; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99JP-0186718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chkubo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mogi S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Noguchi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                           joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
```

Sequence

923 BP;

303

ď

147 C;

213 ဝ 260

T; 0 other

```
δ
                                                 밁
                                                                        S
                                                                                                    밁
                                                                                                                              Ş
                                                                                                                                                           밁
                                                                                                                                                                                  Ş
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                       US-10-019-455A-49 (1-110) x AAF59083 (1-923)
                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores: Pred. No.:
388
                          101
                                                    328
                                                                                                       268
                                                                                                                                                            208
                                                                                                                                                                                                               148
                                                                           81
                                                                                                                                 61
                                                                                                                                                                                     41
                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                    88 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                    1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
               ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                       GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                        GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                           AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                          AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                               TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                               TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                  TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                  TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle
CCCACCACGATATTGACTTCTTCTGCGAG 417
                                                                                                                                                                                                                                                                                                                                                 3.48e-69
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                  923
7
0
0
                                                    387
                                                                              100
                                                                                                        327
                                                                                                                                  80
                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                     147
                                                                                                                                                                                                                                                                                               20
                                                                                                                                                              267
                                                                                                                                                                                       60
                                                                                                                                                                                                                 207
```

Search completed: December 29, Job time : 134.647 secs 2003, 16:41:16

```
-Q=/cgn2 1/USFTO spool/US10019455/runat 29122003 160349 366/app_query.fasta 1.1770
-DB=Published Applications_NA -QFMT=fastap_SUFFTX=rnpb -MINWATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100
-THR_MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSTZE=500 -MINLEN=0
-MAXIEN=200000000 -USER=US1001945 @CGN 1 1 412 @runat 29122003 160349 366
-NCPU=6 -ICPU=3 -NO_MAAP -LARGBOUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Command line parameters:
-MODEL=frame+_p2n.model -DEV=xlh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - nucleic search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Published_Applications_NA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2244575 segs, 1713117285 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        December 29, 2003, 19:57:30 ; Search time 246.807 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-019-455A-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                            / Cgm2 6/ptodata/2/pubpna/US09B PUBCOMB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US09C PUBCOMB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US09 NEW PUB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US09 NEW PUB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US10A PUBCOMB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US10B PUBCOMB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US10B PUBCOMB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US10B PUBCOMB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US10 NEW PUB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US10 NEW PUB.seq:*
/ Cgm2 6/ptodata/2/pubpna/US10 NEW PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cgn2_(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn2
                                                                                                                                                                                                                                                                                                                                                                                                                                                       n2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
n2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
n2_6/ptodata/2/pubpna/US06_PUBCMB.seq:*
n2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
n2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
n2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
n2_6/ptodata/2/pubpna/US08_PUBCMB.seq:*
n2_6/ptodata/2/pubpna/US08_PUBCMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (without alignments)
1527.048 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4489150
```

	-														Ĭ	_	_	•	٠,	٠.		_			_	_	_	_	٠,	٠.	_	~		•	,		w	7	01	٠.		_	۰	_
541	4	4	4	541	4	541	-₩	-4-	541	- 4	4	4	Α.	4	4	4	541	541	541	541	541	541	541	541	541	541	541	541	541	541	4	44	541	4 4	л (4	4	541	4	4	4	4	4	541
91.5	-	۲	۳	۲.			۲	٠.	۳	۳	1.	-			1.				1		۳.	۲	۲	۲	۲	Ľ		۳	۳.	۳	_	_	- :	٠:	٠.		-	Ë	Ē	ř	Ë	۲	Ë	Ė
521	N	521	N	N	N	521	N	521	·N	·N	521	N	N	N	N	N	N	N	N	N	N	N	N	N	N	521	N	N	N	2	N	N	521	v	υı	v	N	N	N	N	Ν	521	N	N
15	5	15	15	15	15	5	5	5	15	15	5	5	15	15	15	15	15	15	15	5	15	15	13	13	13	13	<u>٦</u>	13	13	13	<u>.</u>		ω ω		ָ ער ני			13				13	13	
10-219	-10-218-956-7	-10-216-165-7	-10-232-233-7	-10-232-231-	-10-230-260-7	-10-219-481-7	-10-219-479-7	10-219-46	-10-219-464-7	-10-219-075-7	-219-003-7	-10-230-434-	9-076-7	-10-227-883-	S-10-227-873-7	218-8	-10-216-159A-	0-230-414-	-10-218-631-	-10-230-3	-10-230-163-	-10-227-884-7	S-10-223-082-	-10-232-228-7	0-230-437-7	-10-223-081-3	0-219-533-7	-10-219-532-7	-10-219-531-	-10-219-530-7	-10-219-526-7	-10-219-525-7	10-219-	-10-219-480-7	10-219-475-	-10-219-073-7	-10-219-069-7	10-219-068-7	-10-219-067-7	-10-219-066-7	-10-219-063-7	S-10-218-765	-216-163-7	-10-216-038-
quence 71,	emience 71	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71,	equence 35	equence 71,	equence 71,	equence 359,	equence 71,	equence 71,	equence 71,	equence 71,	equence 71.	equence 71	equence 71.	equence 71	equence 71	equence 71	emience 71	equence 71.	equence 71,	equence 71,	equence 71,	equence 7	equence	Sequence 1, A
Appl	, ,	Appl	Appl	Appl	Appl	App1	App1	Appl	App1	Appl	App 1	Appl	Appl	Appl	Appl	Appl	Appl	App1	Appl	Appl	Appl	Appl	י סי	App1	App1	App	Appl	Appl	Appl	Appl	Appl	Appl	Appl	יייני קייני קייני	ָרֶלְ קיליל יי	בירה המילי	7 7	י ס	י ס	'ס	Appl	Appl	Appl	ppli

ALIGNMENTS

US-10-216-038-1

Sequence 1, Application US/10216038
Publication No. US20030124573A1
GENERAL INFORMATION:
APPLICANT: Mize, Nancy K
APPLICANT: Boyle, Bryan J

APPLICANT:

Boyle, Bryan J Ford, John E Arterburn, Matthew C Tang, Y Tom

```
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
CURRENT APPLICATION NUMBER: US/10/216,038
CURRENT FILING DATE: 2002-08-08
PRIOR APPLICATION NUMBER: US 09/563,786
PRIOR FILING DATE: 2000-05-02
PRIOR APPLICATION NUMBER: US 09/491,404
PRIOR FILING DATE: 2000-01-25
NUMBER OF SEQ ID NOS: 8
                                                                                                                                                                  TITLE OF INVENTION: Methods and Materials Relating to No. US20030124573Alel Growth TITLE OF INVENTION: Polypeptides and Polynucleotides FILE REPERENCE: HYS-7CIP
                                                                                                                                                                                                                                                                      Tang, Y Tom
Liu, Chenghua
Drmanac, Radoje T
                                                                                                                                                                                                                       Song, Yong
Sond, Michael
```

z

Result No.

Score

Query Match Length DB

ij

Description

SUMMARIES

```
APPLICANT: Stephan, Jean-Philippe F.

APPLICANT: Watanabe, Colin L.

APPLICANT: Watanabe, Colin L.

TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCI

TITLE OF INVENTION: ACIDS ENCODING THE SAME

FILE REFERENCE: P3530P1C3

CURRENT APPLICATION NUMBER: US/10/216,163

CURRENT FILING DATE: 2002-08-09

PRIOR APPLICATION NUMBER: 10/119,480

PRIOR APPLICATION NUMBER: 60/059113

PRIOR FILING DATE: 1997-09-17

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR APPLICATION NUMBER: 60/062287

PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-49 (1-110) x US-10-216-038-1 (1-426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-216-038-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 71, Application US/10216163 Publication No. US20030149239A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn version 3.1 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
NAME/KEY: misc feature
LOCATION: (426)...(426)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 426
        APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8,1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCACCACGGATATTGACTTCTTCTGCGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTÁGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.08e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         o,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         o
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98
0
0
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                   GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J
APPLICANT: Grimaldi, J. Chr
APPLICANT: Gurney, Austin L
APPLICANT: Gurney, Austin L
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                             US-10-218-765-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-216-163-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-49 (1-110) x US-10-216-163-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR PRIOR PRICINGUN UNMER: 60/069873
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                  Sequence 71, Application US/10218765
Publication No. US20030187201A1
                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                            APPLICANT:
OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92
                                                                                                   Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                             CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATTTCCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                       Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                          Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0 5 7 8 9 8 1
```

331 80 271 60 211

S 밁 á 片 Ś 멼 S 밁 S 밁 Ś

FILING DATE: 1998-08-17 APPLICATION NUMBER: 60/097 FILING DATE: 1998-08-26 APPLICATION NUMBER: 60/098 FILING DATE: 1998-08-31 APPLICATION NUMBER: 60/099 FILING DATE: 1998-09-09 FILING DATE: 1998-09-09 FILING DATE: 1998-09-09 APPLICATION NUMBER: 60/099 APPLICATION NUMBER: 60/099 FILING DATE: 1998-09-10	APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI FILING DA APPLICATI	APPLICATION APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION APPLICATION APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION FILING DATI APPLICATION APPLIC	CURRENT APPLICATION NUMBER: US/10/218,765 CURRENT FILING DATE: 2002-08-12 PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09 PRIOR FILING DATE: 1997-09-17 PRIOR APPLICATION NUMBER: 60/059113 PRIOR APPLICATION NUMBER: 60/06287 PRIOR PILING DATE: 1997-10-17 PRIOR APPLICATION NUMBER: 60/664103 PRIOR APPLICATION NUMBER: 60/664103 PRIOR PILING DATE: 1997-10-28 PRIOR APPLICATION NUMBER: 60/069873 PRIOR APPLICATION NUMBER: 60/079973 PRIOR APPLICATION NUMBER: 60/079994 PRIOR APPLICATION NUMBER: 60/079294 PRIOR APPLICATION NUMBER: 60/079294 PRIOR APPLICATION NUMBER: 60/079294 PRIOR PILING DATE: 1998-03-26 PRIOR PILING DATE: 1998-03-26 PRIOR APPLICATION NUMBER: 60/079294 PRIOR PILING DATE: 1998-03-25 PRIOR APPLICATION NUMBER: 60/079294 PRIOR PILING DATE: 1998-03-25 PRIOR APPLICATION NUMBER: 60/07928
PRIOR FILING DATE: 1999-03-10 PRIOR APPLICATION UNMER: 60/125259 PRIOR APPLICATION UNMER: 60/12575 PRIOR APPLICATION UNMER: 60/125775 PRIOR FILING DATE: 1999-03-23 PRIOR REPLICATION UNMER: 60/126773 PRIOR FILING DATE: 1999-03-29 PRIOR APPLICATION UNMER: 60/127887 PRIOR FILING DATE: 1999-04-05 PRIOR APPLICATION NUMBER: 60/130232 PRIOR APPLICATION NUMBER: 60/131022	PRIOR APPLICATION NUMBER: 60/112422 FRIOR ATPLING DATE: 1998-12-15 FRIOR FILING DATE: 1998-12-22 FRIOR APPLICATION NUMBER: 60/113296 FRIOR APPLICATION NUMBER: 60/113605 FRIOR FILING DATE: 1998-12-23 FRIOR FILING DATE: 1998-12-23 FRIOR FILING DATE: 1998-12-23 FRIOR FILING DATE: 1998-12-23 FRIOR FILING DATE: 1999-01-12 FRIOR APPLICATION NUMBER: 60/115565 FRIOR APPLICATION NUMBER: 60/115733 FRIOR APPLICATION NUMBER: 60/115733 FRIOR APPLICATION NUMBER: 60/119549 FRIOR APPLICATION DATE: 1999-01-10 FRIOR APPLICATION NUMBER: 60/123618 FRIOR APPLICATION DATE: 1999-02-10 FRIOR APPLICATION NUMBER: 60/123618 FRIOR APPLICATION DATE: 1999-02-10 FRIOR APPLICATION NUMBER: 60/123618	PRIOR APPLICATION NUMBER: 60/101741 PRIOR FILING DATE: 1998-09-24 PRIOR APPLICATION NUMBER: 60/101786 PRIOR FILING DATE: 1998-09-25 PRIOR FILING DATE: 1998-09-25 PRIOR PRIOR PRIOR APPLICATION NUMBER: 60/101916 PRIOR APPLICATION NUMBER: 60/101922 PRIOR APPLICATION NUMBER: 60/106178 PRIOR APPLICATION NUMBER: 60/106248 PRIOR APPLICATION NUMBER: 60/106464 PRIOR APPLICATION NUMBER: 60/106464 PRIOR APPLICATION NUMBER: 60/106905 PRIOR APPLICATION NUMBER: 60/108907 PRIOR APPLICATION NUMBER: 60/108907 PRIOR APPLICATION NUMBER: 60/108907 PRIOR APPLICATION NUMBER: 60/108907 PRIOR APPLICATION NUMBER: 60/108907 PRIOR APPLICATION NUMBER: 60/108907 PRIOR APPLICATION NUMBER: 60/108907 PRIOR APPLICATION NUMBER: 60/108907 PRIOR FILING DATE: 1998-11-17 PRIOR PRIOR PILING DATE: 1998-11-17 PRIOR PILING DATE: 1998-11-17 PRIOR PILING DATE: 1998-11-17 PRIOR PILING DATE: 1998-11-17 PRIOR PILING DATE: 1998-11-17	PRIOR APPLICATION NUMBER: 60/099811 PRIOR FILING DATE: 1998-09-10 PRIOR APPLICATION NUMBER: 60/099812 PRIOR APPLICATION NUMBER: 60/099816 PRIOR APPLICATION NUMBER: 60/099816 PRIOR APPLICATION NUMBER: 60/10038 PRIOR FILING DATE: 1998-09-11 PRIOR APPLICATION NUMBER: 60/100385 PRIOR FILING DATE: 1998-09-15 PRIOR APPLICATION NUMBER: 60/100390 PRIOR FILING DATE: 1998-09-15 PRIOR APPLICATION NUMBER: 60/100390 PRIOR FILING DATE: 1998-09-16 PRIOR APPLICATION NUMBER: 60/100627 PRIOR APPLICATION NUMBER: 60/100627 PRIOR APPLICATION NUMBER: 60/100919 PRIOR FILING DATE: 1998-09-18 PRIOR APPLICATION NUMBER: 60/10019 PRIOR FILING DATE: 1998-09-17 PRIOR APPLICATION NUMBER: 60/101477 PRIOR APPLICATION NUMBER: 60/101477 PRIOR PILING DATE: 1998-09-23 PRIOR PILING DATE: 1998-09-24

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-49 (1-110) x US-10-218-765-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Х
О
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/169445
FILING DATE: 1999-12-07
APPLICATION NUMBER: 60/169495
FILING DATE: 1999-12-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/144758
FILING DATE: 1999-07-20
APPLICATION NUMBER: 60/145698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1999-11-09
APPLICATION NUMBER: 60/166361
FILING DATE: 1999-11-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/149320
FILING DATE: 1999-08-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/146963
FILING DATE: 1999-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/141037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/134287
FILING DATE: 1999-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/131445 FILING DATE: 1999-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1999-04-27
APPLICATION NUMBER: 60/131291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/164418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/151733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/149638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/146222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1999-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/140723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/140650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/131270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1999-08-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING
                       392
                                                         101
                                                                                             332
                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                      152
                                                                                                                                                                      272
                                                                                                                                81
                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                                           92
                                                                                                                                                                                                                                                                                                                                                                                                                                ۳
                                                                                                                                                                                                                                                                                                                                             TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                            HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                               GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                      TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                             CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                      GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                             AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                        CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                        ProThrThrAspIleAspPhePheCysGlu 110
                                                                                             TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT
                                                                                                             TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER: 60/169835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1999-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1999-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1999-08-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1999-07-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1999-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         521
98
0
                                                                                                                                                                                                         90
                                                                                                                                                                                                                                               271
                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                      331
                                                                                                                                                                                                                                                                                                                      211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
US-10-219-063-71
                     S
                                                         멍
                                                                                          Ś
                                                                                                                                  g
                                                                                                                                                                 Ś
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo
US-10-219-063-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 71, Applicat
Publication No. US20
GENERAL INFORMATION:
APPLICANT: Baker, Ke
APPLICANT: Desnoyer
                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                US-10-019-455A-49 (1-110) x US-10-219-063-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 50/079873
PRIOR FILING DATE: 1998-10-20
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 10/119,480 PRIOR FILING DATE: 2002-04-09 PRIOR APPLICATION NUMBER: 60/059113 PRIOR FILING DATE: 1997-09-17 PRIOR APPLICATION NUMBER: 60/062287 PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C24 CURRENT APPLICATION NUMBER: US/10/219,063 CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-03-26
                                                         212
                                                                                                                                  152
41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                    21
                                                                                                                                                                                                         92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
Goddwski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                         AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAAATGGAGCT
                                                                                                                                                       TyrThrIleSerLeuAlaArgAlaGinGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                         CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                HisGlyMetPheMetAspLysLeuSerSerLysLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10219063
No. US20030187202A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kevin P.
                                                                                                                                                                                                                                                                                                                      5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                        80
                                                                                             60
                                                                                                                                                                                                           151
                                                           271
                                                                                                                                  211
                                                                                                                                                                                                                                               20
```

밁 Ś 밁 S

Ş 밁 Š Ś

뮍

Ś

밁

BB:

PRIOR

PRIOR

271

```
밁
                                                                       გ
                                                                                                                    US-10-019-455A-49 (1-110) x US-10-219-066-71 (1-521)
                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                    ; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-066-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-219-066-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                         ercent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 71,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: P3530P1C27
CURRENT APPLICATION NUMBER: US/10/219,066
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                        Х
О. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/079294
OR FILING DATE: 1998-03-25
OR APPLICATION NUMBER: 60/079656
OR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/069873 FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/063549
FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   392 CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTÁCCAAGGAÁGTT 391
                          92 CATGGAATATTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                       1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10219066
                                                                                                                                                              5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                    Conservative: Mismatches:
                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                          521
0 0 5 7 8 8 0
    Percent Similarity:
                                               Pred. No.:
                                                                Alignment Scores:
                                                                                                               US-10-219-067-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-219-067-71
                                                                                                                                                                                                  SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 71, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P9530P1C51
CURRENT APPLICATION NUMBER: US/10/219,067
CURRENT FILING DATE: 2002-08-14
                                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR PILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                             TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baker, Kevin P.
                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1997-12-17
APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332 TATTTCCCCAGGAACTTGGTCAAGGAÁCAGCGTGTGTÁCCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392 CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GiyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10219067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
5.47e-75
541.00
95.45%
                    Length:
Matches:
Conservative:
```

```
US-10-019-455A-49 (1-110) x US-10-219-067-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local S. Query Match:
                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/219,068
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 71, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                  PRIOR FILING DATE: 1998-03-27
                                                                                      APPLICATION NUMBER: 60/079656 FILING DATE: 1998-03-26 APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                    FILING DATE: 1997-12-17
APPLICATION NUMBER: 60/078910
                                                                                                                                                               APPLICATION NUMBER: 60/079294 FILING DATE: 1998-03-25
                                                                                                                                                                                                                FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81 TyrpheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prior Application data removed - See File Wrapper or PALM.
SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10219068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US20030187205A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         211
APPLICANT: Scheban, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530PLC40
CURRENT APPLICATION NUMBER: US/10/219,069
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-21
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; SEQ ID NO 71
; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-068-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-49 (1-110) x US-10-219-068-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gertitsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 71, Application US/10219069 Publication No. US20030187206A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            000
```

밁

Ş 밁 Ş 밁 S B

밁 Ś S 밁

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-069-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-019-455A-49 (1-110) x US-10-219-069-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                                                                                                     Sequence 71, Ap
Publication No.
                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                     APPLICANT: Gurney, Austin L.

APPLICANT: Smith, Victoria
APPLICANT: Stephan, Jean-Philippe F.
APPLICANT: Watanabe, Colin L.
APPLICANT: Watanabe, Colin L.
APPLICANT: Wood, William I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE P353001C52
CURRENT APPLICATION NUMBER: US/10/219,073
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                             APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc APPLICANT: Gerritsen, Mar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 246
                 FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
                                                                                                                                                                                                                                   Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                        Application US/10219073
                                                                                                                                                                                                                                                                                                                                                                        US20030187207A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.47e-75
541.00
95.45%
89.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          521
98
7
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211
     Sequence 71, Application US/1
Publication No. US20030187208
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Desnoyers, Luc
APPLICANT: Gerritsen, Mary
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J
APPLICANT: Grimaldi, J. Chr
APPLICANT: Gurney, Austin I
APPLICANT: Smith, Victoria
                                                                                                                                                                                                              US-10-219-475-71
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-219-073-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION THE STATE 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                        392
                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                 332
                                                                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
Goddard, Audrey
Godowski, Paul J.
Gofowski, Paul J.
Gorimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                              Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                         Application US/10219475
vo. US20030187208A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.47e-75
541.00
95.45%
89.09%
91.54%
```

```
US-10-019-455A-49 (1-110) x US-10-219-073-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                      152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 HisGlyMetPheMetAspLysLeuSerSerLysLysLysLeuCysAlaAspGluGluCysVal
ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                        GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                         AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                           TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                  AACGTTAAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                              GGAGAATTTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151
                                                                                                                                                                                                                                                                                                  271
                                                                                                                                                                                                                                                                                                                                                                                                                      211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
```

```
RESULT 11
US-10-219-480-71
                                                                                                        Ş
                                                                                                                                            8
                                                                                                                                                                             Ş
                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-475-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-49 (1-110) x US-10-219-475-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/219,475
CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TILE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20 APPLICATION NUMBER: 60/079294 FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/069873 FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1997-09-17
APPLICATION NUMBER: 60/062287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/063549 FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-03-26
APPLICATION NUMBER: 60/079728
                                                                                                        101
                                                                       392
                                                                                                                                            332
                                                                                                                                                                                                                   272
                                                                                                                                                                                                                                                                                          212
                                                                                                                                                                                                                                                                                                                                                               152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                               81
                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                      92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Н
                                                                                             ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                           GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                            TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                                                                                        AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                  AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                             TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
Application US/10219480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 7 8 5 2 1
0 0 0 0
                                                                                                                                                                                                                                                                                        271
                                                                                                                                                                                                                                                                                                                                                             211
                                                               S
                             밁
                                                                                                    밁
                                                                                                                                      Ś
                                                                                                                                                                            В
                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
```

```
US-10-019-455A-49 (1-110) x US-10-219-480-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; LENGTH: 521
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-480-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-28
PRIOR FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR APPLICATION NUMBER: 60/079910
PRIOR APPLICATION NUMBER: 60/079294
PRIOR APPLICATION NUMBER: 60/079656
PRIOR APPLICATION NUMBER: 60/079728
PRIOR APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1998-03-27
Remaining Prior Application d
NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Baker, K
APPLICANT: Desnoye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Publication No. US20030187209A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P530PLC38 CURRENT APPLICATION NUMBER: US/10/219,480 CURRENT FILING DATE: 2002-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/064103 PRIOR FILING DATE: 1997-10-31
                                                 272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGGATGGGAGTCGTGGGT
                                                                                                                                                          212 AACGTTAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                  61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                      152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                        41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                 21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                            92 CATGGAATATTTAIGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
                                                                                                                                                                                                                                                                                                                                                                                                             1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Philippe F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  data removed - See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                              60
                                                                                                                                                             271
                                                                                                                                                                                                                                                                   211
```

```
Ş
                                                                                                                                                Ś
                                                                                                                                                                                            US-10-019-455A-49 (1-110) x US-10-219-483-71 (1-521)
                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-219-483-71
                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/219,483
CURRENT FILING DATE: 2002-08-13
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
PRIOR FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
US-10-219-483-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 71, Application US/10219483 Publication No. US20030187210A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/079656
PRIOR TILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3530P1C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                      152
                                           21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                           92
                                                                                                                              1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC 151
             TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Auggrafith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                                   5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Austin L.
                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
Indels:
Gaps:
             211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEDTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530P1C29
CURRENT APPLICATION NUMBER: US/10/219,525
CURRENT APPLICATION NUMBER: 10/119,480
PRIOR FILLING DATE: 2002-08-13
PRIOR FILLING DATE: 2002-09-13
PRIOR FILLING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/059113
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILLING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILLING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/064103
PRIOR APPLICATION NUMBER: 60/069873
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILLING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILLING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILLING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILLING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: 60/069873
PRIOR FILLING DATE: 1997-12-17
                                                Percent Similarity:
Best Local Similarity:
           Query Match:
DB:
                                                                                                                  Pred. No.:
                                                                                                                                       Alignment Scores:
                                                                                                                                                                                     US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
US-10-219-525-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Baker, Ke
APPLICANT: Desnoyer
APPLICANT: Gerritse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 71, Application US/10219525
Publication No. US20030187211A1
                                                                                                                                                                                                                                                                                               Remaining Prior Application
NUMBER OF SEQ ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/79294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/079728 PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                   Q ID NO 71
LENGTH: 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332 TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272 GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 AsnVallysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCACCACGGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kevin P.
    5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                               data removed - See File Wrapper
Gaps:
                                                                                         Length:
Matches:
                         Mismatches:
Indels:
                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
98
7
0
                                                                                                                                                                                                                                                                                                                 or PALM
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-019-455A-49 (1-110) x US-10-219-525-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/062287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 246
SEQ ID NO 71
LENCTH: 521
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 71, Application US/10219526 Publication No. US20030187212A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: WOOD, WILLIAM I.
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3530p1C41
CURRENT APPLICATION NUMBER: US/10/219,526
CURRENT FILING DATE: 2002-08-13
                                                                                                              PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                 A APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/064103
FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/069873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCCCAGGAACTTGGTCAAGGAACAGCGTGTGTACCAGGAAGCTACCAAGGAAGTT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCACCACGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                211
```

```
TITLE OF INVENTION: SCCRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: SCCRETED AND THE SAME
FILE REFERENCE: P3530PLC54
CURRENT APPLICATION NUMBER: US/10/219,530
CURRENT APPLICATION NUMBER: US/10/219,530
CURRENT FILING DATE: 2002-08-14
PRIOR APPLICATION NUMBER: 10/119,480
PRIOR FILING DATE: 2002-04-09
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/06287
PRIOR APPLICATION NUMBER: 60/06287
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/063549
PRIOR FILING DATE: 1997-10-31
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
PRIOR APPLICATION NUMBER: 60/063549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-219-530-71; Sequence 71, Ap; Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo Sapien US-10-219-526-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-49 (1-110) x US-10-219-526-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P. APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  152 TATACTATTTCTCTGGCTAGTGCTCAAGAAGATTATAATGCCCCGGACTGTAGATTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 AsnVallysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92 CATGGAATATTTATGGACCGTCTAGCTTCCAAGAAGCTCTGTGCAGATGATGAGTGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HisGlyMetPheMetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
Gerritsen, Mary
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCACCACGATATTGACTTCTTCTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAATTTTGGGCTGGCAGTGTTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACGTTAAAAAAGGGCAGCAGATCTATGTGTACTCAAAGCTGGTAAAAGAAAATGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stephan, Jean-Philippe F. Watanabe, Colin L. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin L. Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10219530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US20030187213A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.47e-75
541.00
95.45%
89.09%
91.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           151
```

```
PRIOR FILING DATE: 1998-03-25

PRIOR APPLICATION NUMBER: 60/079656

PRIOR FILING DATE: 1998-03-26

PRIOR APPLICATION NUMBER: 60/079728

PRIOR FILING DATE: 1998-03-27

Remaining Prior Application data removed - See File Wrapper or PALM.

NUMBER OF SEQ ID NOS: 246

SEQ ID NO 71

SEQ ID NO 71

PURCH: 521

TYPE: DNA

ORGANISM: Homo Sapien

US-10-219-530-71
                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                              US-10-019-455A-49 (1-110) x US-10-219-530-71 (1-521)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                        g
                                                                                                                                Ś
                                                                                                                                                             밁
                                                                                                                                                                                  Ś
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                       밁
Search completed: December 30, Job time: 248.807 secs
                                                                            Ş
                                                                                                        81 TyrPheProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIle 100
                                                                                                                                                                                                                                                                         392
                                                                     101 ProThrThrAspIleAspPhePheCysGlu 110
                                                                                                                                                               272 GGAGAATTTTGGGGCTGGCAGTGTTATGGTGATGGCCAGGACGAGATGGGAGTCGTGGGT 331
                                                                                                                                                                                                                    212 AACGTTAAAAAAGGGCAGCAGATCTATGTGTATCTCAAAGCTGGTAAAAGAAAATGGAGCT 271
                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                   41 AsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAla 60
                                                                                                                                                                                                                                                                                         21 TyrThrIleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIle
                                                       CCCACCACGGATATTGACTTCTTCTGCGAG 421
                                                                                                                                                                               GlyAlaPheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGly 80
                                                                                                                                                                                                                                                                                                                                                                                                               5.47e-75
541.00
95.45%
89.09%
91.54%
                  2003, 02:01:10
                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                   521
98
7
0
                                                                                                                                                                                                                                                                                                             40
```

```
Command line parameters:

-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USFTO_spool/US10019455/runat_29122003_160348_277/app_query.fasta_1.1770
-Q=/cgn2 1/USFTO_spool/US10019455/runat_29122003_160348_277/app_query.fasta_1.1770
-DB=ISSUMEd Patents NA -CpMT=fastap -SUFFTX=rni -MINMATCH=0.1 -LGOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MXX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=sct -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10019455 @CGN 1 1 142 @runat 29122003 160348 277 -NCDU=6 -ICPU=3
-NO_MMAP -LARGEQÜERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                        Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
    264.5
2244.5
2244.5
224.5
19.7
160.5
91.5
91.5
85.5
                                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                  44446
                                                                                                                                                                                                                                                                   Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-019-455A-49
591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               December 29, 2003, 16:24:24; Search time 34.972 Seconds (without alignments) 1388.315 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 569978 segs, 220691566 residues
    Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HGMFMDKLSSKKLCADEECV......RVYQEATKEIPTTDIDFFCE 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                     330
459
581
305
596
3565
2793
2757
2757
4762
4762
US-08-578-649-1

US-08-578-649-1

US-08-578-649-4

US-08-578-649-24

US-08-578-649-24

US-08-578-649-3

US-07-646-5378-1

US-08-306-691B-48

PCT-US93-06251-79

US-09-300-958A-28

US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1139956
                                                        Sequence 18, Appl
Sequence 1, Appli
Sequence 4, Appli
Sequence 8, Appli
Sequence 24, Appli
Sequence 3, Appli
Sequence 1, Appli
Sequence 48, Appl
Sequence 79, Appl
                                                                                                                                                                                                                                                                   Description
                     Sequence
                                        Sequence
```

4 4 4 2 5 4 3 2	443333 400876 1	7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	C 116 C 117 C 220 C 220
თ თ თ თ თ თ თ თ	თ თ თ თ თ თ ი თ თ თ თ თ თ ი		00001111
			12.5 12.5 12.5 11.7 11.7 11.3
1191 1191 1191 2017	9 1 1 1 1 1 1 1	D C C C C C C C C C C C C C C C C C C C	2085 2085 2520 2520 2520 971 1457 1664976 1664976 2064
	. 4. 444		
18-459-967- 18-460-327- 18-459-871- 18-434-255-	-09-417-3 -08-459-9 -08-459-9 -08-459-9 -08-459-8	-08-583-799 -08-164-839 -08-164-839 -08-583-799 -08-583-799 -08-583-799 -08-434-255 -08-460-327 -08-450-871 -09-024-532	-08-164-839-3 -08-164-839-5 -08-164-839-5 -08-630-915A- -08-630-915A- -08-916-421B (S-08-916-421B (S-08-164-839-3
equence 3, App equence 3, App equence 3, App equence 27, Ap	equence 1, equence 5, equence 5, equence 5, equence 5, equence 3,	quence 30, Ap quence 69, Ap quence 71, Ap quence 69, Ap quence 7, App quence 7, App quence 7, App quence 7, App quence 7, App quence 1, App quence 1, App quence 1, App	equence 3, equence 5, equence 5, equence 197 equence 1, Sequence 1, Sequence 1, Sequence 3, Sequence 3,

ALIGNMENTS

```
RESULT 1
US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 18, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No.
                                                                                                                              COMPUTER: IBM PS/2

COMPUTER: IBM PS/2

OPERATING SYSTEM: PC-DOS

SOFTWARE: WOOTOPEFGCt

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/578,649

FILING DATE: 29-JULY-1994

CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P43 24 247.2

FILING DATE: 20-JULY-1993

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Ulrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEFAX: (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                  NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                             10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T: 805 Third Avenue
New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ulrich Bogdan
                                                                                                                                                                                                                                                                                                                                                                                  inch 1.44 Mb storage diskette
```

```
RESULT 2
US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; NAME/KEY: misc_RNA; LOCATION: 4..6
; OTHER INFORMATION: US-08-578-649-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-019-455A-49 (1-110) x US-08-578-649-18 (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/08578649 Patent No. 5770366 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                     APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 330 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: CDNA
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DC
SOFTWARE: Wordperfect
URRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
LOCATION:
                                                                                                                      COUNTRY:
                                                                                                                                                       CITY: New York
                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acia
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                             103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133
                                                                                                                                                                                                                                                                                                                                                                                                             304 GACAAATGGGATTTCTACTGCCAG 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25 LeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 44
                                                                                                      10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGCTATTTC 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyGlnGlnIleTyrValTyrSeriysLeuValThrGluAsnGlyAlaGly---AlaPhe 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGCCAAAATTAGCAGATCGTAAATTATGTGCAGATCAGGAGTGCAGCCACCCTATCTCC 72
                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----AAGGGCCGTGGGCCGGCTCTTC 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGG 132
                                                                                                                                        New
                                                                                                                                                                       805 Third Avenue
                                                                                                                      USA
                                                                                                                                                                                                                                                                                        Ulrich Bogdan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mat_peptide 7..327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                        Felfe & Lynch
                                                                                                                                        York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.08e-29
264.50
67.59%
46.30%
                                      SOG-Dd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /function= "Startcodon Met"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18:
                                                                       storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
```

```
RESULT 3
US-08-578-649-4
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                               뭉
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-49 (1-110) x US-08-578-649-1 (1-459)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-578-649-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                 Sequence 4, Application US/08578649
Patent No. 5770366
GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 459 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 29-July-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31.575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION:
                                                                                                                                                                           409 GACAAATGGGATTTCTACTGCCAG
                                                                                                                                                                                                             103 ThrAspIleAspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                  289
                                                                                                                                                                                                                                                                                                                                                                                                          238 GGCCAAGTGGTGTATGTCTTCTCCAAGCTG------AAGGGCCGTGGGCGGCTCTTC 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 ATGGCTGTGGCCCTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCACCCTATCTCC 177
                                                                                                                                                                                                                                                                                      83 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 102
                                                                                                                                                                                                                                                                                                                                                                  64 TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                            45 GlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGly---Alaphe 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25 LeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer 24
                                                                                                                                                                                                                                                    CCCAGTAGCATTGTCCGAGAGGACCAGACCCTGAAACCTGGCAAAGTCGATGTGAAGACA
                                                                                                                                                                                                                                                                                                                              TGGGGAGGCAGCGTTCAGGGAGATTACTATGGAGATCTGGCTGCTCGCCTGGGCTATTTC 348
Reinhard Buttner
Brigitte Kaluza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mat_peptide
112..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40..432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sgo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.73e-29
264.50
67.59%
46.30%
44.75%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 408
```

APPLICANT:

```
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                     US-10-019-455A-49 (1-110) x US-08-578-649-4 (1-581)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-578-649-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (212) 688-9200
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAMS: Andrew L. Tiajoloff
REGISTANT NUMBER: 31.57
REFERENCE/DOCKET NUMBER: BO
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSE: Felie & Lynch
STREET: 805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 43 24 247.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 20-July-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 29-Jul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                              245 ATGGCTGTGGCCCTCCAGGACTACGTGGCCCCTGATTGCCGCTTCTTGACTATATAGG 304
                                                                                                                                                                                                                                                                       185 ATGCCCAAGCTGGCTGACTGGAAGCTGTGTGCGGACGAGGAATGCAGCCATCCTATCTCC 244
                                              356 TGGGGAGGCAGTGTTCAGGGAGGTTACTATGGAGACCTGGCAGCCCGCCTGGGCTATTTC
                                                                                                                        305 GGCCAAGTGGTGTATGTCTTCTCCAAGTTG-----AAGGGCCGTGGGCCCTTTTC
     83 ProSerAsnLeuValArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThr 102
                                                                               64 TrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIle---ValGlyTyrPhe 82
                                                                                                                                                        45 GlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGly---AlaPhe
                                                                                                                                                                                                                                25 LeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLys 44
                                                                                                                                                                                                                                                                                                  5 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSer 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         581 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sig_peptide
110..178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mat_peptide
179..499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                       244.50
64.81%
46.30%
41.37%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.97e-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/578,649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                      355
                                                                               B
                                     S
                                                                                                                 Ş
                                                                                                                                                    US-10-019-455A-49 (1-110) x US-08-578-649-8 (1-305)
                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                 US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-578-649-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8, Appli
Patent No. 577036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (212) 838-3884 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 305 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BO
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DAFA:
APPLICATION UNMER: DE P 43 24 247.2
FILING DATE: 20-U1y-1993
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DO
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_RNA
LOCATION: join(1..29, 277..305)
OTHER INFORMATION: /function= "Primer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67
                             32 TyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrValTyr 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      103 ThraspIleaspPhePheCysGlu 110
                                                                                                         12 LysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArgAlaGlnGluAsp 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   476 GATCAATGGGATTTCTACTGCCAG 499
                                                                          7 AAGTTTTCGGCGGATCAGGAGTGCAGCCACCCTATCTCCATGGCTGTGGCCCCTTCAGGAC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10022
TACATGGCCCCGACTGCCGATTCCTGACCATTCACCGGGCCAAGTGGTGTATGTCTTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08578649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                            64.65%
45.45%
37.65%
                                                                                                                                                                                                                                                                 1.25e-23
222.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BOER 1035-PFF/ALT
                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                          305
19
30
```

Ś В ş 밁 S 밁 Ş

S 밁 Ś 밁 Ś

₽

```
US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 24, Application US/08578649 Patent No. 5770366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (212) 688-9200
TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 24
SEQUENCE CHARACTERISTICS:
LENGTH: 596 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-JULY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Andrew L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TTTLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: MELANOM NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ent No.
                                                                FEATURE
                                                                                                                           FEATURE
                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: PC-DO SOFTWARE: WORDDERFECT CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: bv-
STREET: New York
                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                             LOCATION:
                                              NAME/KEY:
                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                            LOCATION:
                                                                                     LOCATION:
                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178 GATTACTATGGAGATCTGGTCGCCTGGCCTAGGCATTTCCCCCAGTAGCATTGTCCGAGAG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238 GACCAGACCCTGAAAACCTGGCAAAGTCGATGTGAAGACAGATAAATGGGATTTCTAC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127 TCCAAGCTG-----AAGGGCCGTGGGCGGCTCTTCTGGGGAGGCAGCGTTCAGGGA 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52 SerLysLeuValThrGluAsnGlyAlaGly---AlaPheTrpAlaGlySerValTyrGly 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90 GlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIleAspPhePhe 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71 AspHisGln---AspGluMetGlyIleValGlyTyrPheProSerAsnLeuValArgGlu 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10022
                                                                                                                                                                                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ulrich Bogdan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PS/2
                                                                                 exon
214..347
                                                                                                                                                              exon
                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                           join(40..111, 40..166, 214..347, 393..503, 549
                            393..503
                                              exon
                                                                                                                                           40..166
                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                             24:
                                                                                                                                                                                                                                                                                                                                                                          US-08-578-649-3
                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-578-649-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-019-455A-49 (1-110) x US-08-578-649-24 (1-596)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                  Sequence 3, Application US/08578649
Patent No. 5770366
                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Ulrich Bogdan
APPLICANT: Reinhard Buttner
APPLICANT: Brigitte Kaluza
TITLE OF INVENTION: MELANOMA-INHIBITING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
LOCATION:
FEATURE:
ZIP: 10022
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch 1.44 Mb storage diskette
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
                                                                                                                                                                        NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: one-of(194, 369, 527)
OTHER INFORMATION: /note= "N in positions 194, 369
OTHER INFORMATION: and 527 denotes an indefinite number and sequence
OTHER INFORMATION: of nucleotides "
                                                                                         COUNTRY:
                                                                                                                       STATE:
                                                                                                                                                       STREET:
                                                                                                                                       CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    237 CTTCAGGACTACATGGCCCCCGACTGCCGATTCCTGACCATTCACCGGGGCCAAGTGGTG 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          525 CANTITCCCCCTTTCTCTTTTCAGAAATGGGATTTCTACTGCCAG 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                468 ACCCTGAAACCTGGCAAAGTCGATGTG---AAGACAGACGTGGAGTGTCATGGGGGGCTGG 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               408 TATGGAGATCTGGCTGCCTGGGCTATTTCCCCAGTAGCATTGTCCGAGAGGACCAG 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          348 GTGGGTCTTGGGAGAGTGAAANAGCTTTTAACTCCTCTTCCCCAGGTTCAGGGAGATTAC 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     297 TATGTCTTCTCCAAGCTG------AAGGGCCGTGGGCGGCTCTTCTGGGGAGGCAGC 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 177 GGAGGGTAGAATTGGGNCCCTTCTATTCCTTCCCTAGACCCTATCTCCATGGCTGTGGCC 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49 TyrValTyrSerLysLeuValThrGluAsnGlyAlaGly---AlaPheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29 GlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIle 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92 ValTyrGlnGluAlaThrLysGluIleProThrThrAspIle------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73 GlnAspGluMetGlyIle---ValGlyTyrPheProSerAsnLeuValArgGluGlnArg 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCysValTyr------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------ValTyrGlyAspHis 72
                                                                                                                   New York
                                                                                                                                                       805 Third Avenue
                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               549..569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.67e-19
197.00
47.74%
32.90%
33.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------AspPhePheCysGlu 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----ThrileSerLeuAlaArgAla 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 596
51
23
28
54
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-49 (1-110) x US-08-578-649-3 (1-3565)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: DE P 43 24 247.2
FILING DATE: 20-July-1993
ATTORNBY/AGENT INFORMATION:
NAME: ANDREW L. Tiajoloff
REGISTRATION NUMBER: 31,575
REFERENCE/DOCKET NUMBER: BOER 1035-PFF/ALT
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/578,649 FILING DATE: 29-July-1994
                                                                                                                                                                                                   1516 GAGGGGTAGAATTGGGCTTGGGTGTTAGCCTGTGTGGATGTGCTGCATTCCCCTTCTATT 1575
                                                                                                                                                                                                                                                                           1456 ATGCCCAAGCTGGCTGACCGGAAGCTGTGTGCGGACCAGGAGTGCAGCCGTAAGAATGGG 1515
                                                          1636 CGATTCCTGACCATTCACCGGGGCCAAGTGGTGTATGTCTTCTCCAAGCTG-----
                                                                                                                               1576 CCTTCCCTAGACCCTATCTCCATGGCTGTGGCCCTTCAGGACTACATGGCCCCGACTGC
58 AsnGlyAlaGly---AlaPheTrpAlaGlySerVal 68
                                                                                                                                                                                                                                               19 -----
                                                                                                                                                                                                                                                                                                                5 MetAspLysLeuSerSerLysLysLeuCysAlaAspGluGluCys---------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid
                                                                                         ArgPheIleAsnValLysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGlu 57
                                                                                                                                                             -----ValTyrThrileSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3565 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
3232..3252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  one-of (2216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
1378..1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sig_peptide
1378..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2804..2914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1586..1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                           4.38e-13
160.50
51.09%
39.13%
27.16%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "N in position 2216 denotes an indefinite number ans sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nuclectides"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                               1635
                                                                                                                                                                 37
                                                                                                                                                                                                                                                                                                                 19
                                                                                                                                                                                                                                         19
RESULT
                                                                    Ś
                                                                                                        멍
                                                                                                                                          Ś
                                                                                                                                                                                밁
                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                         US-10-019-455A-49 (1-110) x US-07-646-537B-1 (1-2793)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-07-646-537B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-07-646-537B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/07646537B Patent No. 5348864 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (609) 921-4526
INFORMATION FOR SEQ ID NO: :
SEQUENCE CHARACTERISTICS:
LENGTH: 2793 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (609) 921-5901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Gaul, Timothy J.
REGISTRATION NUMBER: 33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Barbacid, TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPETWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: New Jersey COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 08543-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Princeton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                       2516 TATGTGGAGGAAGAC----TATTCCGAA 2539
                                                                                                    2477 GGGGAGATCTACGGCCGG------
                                                                                                                                                                                2429 GATATCATC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1687 AAGGGCCGTGGGCGCTCTTCTGGGGAGGCAGCGTG 1722
                                                            86 LeuValArgGluGlnArgValTyrGlnGlu 95
                                                                                                                                 66 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 85
                                                                                                                                                                                                       46 GlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAla 65
                                                                                                                                                                                                                                                                               26 AlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P.O. Box 4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14..2545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bristol-Myers Squibb Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             double
                                                                                                                                                                                                                                                                                                                                                                            93.50
52.86%
32.86%
15.82%
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.00175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vav Proto-Oncogene Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/07/646,537B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mariano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             33,111
                                                                                                                                                                     AAGATCCTCAATAAGAAGGGACAGCAAGGCTGGTGGCGT 2476
                                                                                                                                                                                                                                                                                                                                                                              Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                               ----ATCGGCTGGTTCCCTTCTAAC 2515
```

Alignment Scores: US-08-578-649-3

FEATURE:

NAME/KEY: LOCATION:

FEATURE:

NAME/KEY: LOCATION: NAME/KEY: LOCATION: NAME/KEY: LOCATION:

LOCATION:

FEATURE

FEATURE:

FEATURE

NAME/KEY: LOCATION: NAME/KEY:

LENGTH:

TELEPHONE:

. No. :

S 밁 Ś 밁 Ś В Ś 멍 Ś

```
US-08-306-691B-48
                                                                                                                                                           밁
                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                          당
                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                         Ş
PCT-US93-06251-79; Sequence 79, Application PC/TUS9306251
                                       RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                   US-10-015-455A-49 (1-110) x US-08-306-691B-48 (1-2757)
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-306-691B-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 48, Application US/08306691B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (215) 568-5549
TELEX: NO. 5734039e
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 2757 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORDPEFFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: ANTISENSE
TITLE OF INVENTION: OLIGONUCLECTIDES TARGETING COOPERATING ONCOGENES
NUMBER OF SEQUENCES: 55
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Calabretta, Bruno
APPLICANT: Skorski, Tomasz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY AGENT INFORMATION:
NAME: Monaco, Daniel A.
REGISTRATION NUMBER: 30,480
REFERENCE/DOCKET NUMBER: 8321-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: Two Penn C
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/306,6
FILING DATE: September 15, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (215) 568-8383
TELEFAX: (215) 568-5549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                           2433 GGGGAGATCTATGGCCGG-----
                                                                                                                                                                                                                                       2385 GACATCATC-----
                                                                                                                                                                                                                                                                                                                      2325 GCCAAAGCCCGCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAGGAGGGT 2384
                                                                                2472 TACGTGGAGGAAGAT-----
                                                                                                                                                                                                66 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 85
                                                                                                                                                                                                                                                                             46 GlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAla 65
                                                                                                                      86 LeuValArgGluGlnArgValTyrGlnGlu 95
                                                                                                                                                                                                                                                                                                                                                         26 AlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pennsylvania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: Seidel, Gonda, Lavorgna & Monaco,
Two Penn Center, Suite 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               double
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.00336
91.50
52.86%
32.86%
15.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/306,691B
                                                                                                                                                                                                                                            - AAGATCCTTAACAAGAAGGGACAGCAAGGCTGGTGGCGA 2432
                                                                                  -TATTCTGAA 2495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720 Kb
                                                                                                                                                               -GTTGGCTGGTTCCCTGCCAAC 2471
                                                                                                                                                                                                                                                                                                                                                                                                                                                14
20
13
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: PCT-US93-06251-79
                                                                                                                                                RESULT 10
US-09-300-958A-30
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-019-455A-49 (1-110) x PCT-US93-06251-79 (1-2757)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                             GENERAL INFORMATION:
APPLICANT: McClell
                                                                                                      Sequence 30, Application US/09300958A Patent No. 6495319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 516-742-4366
TELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: McClelland, Michael
APPLICANT: Welsh, John
APPLICANT: Trenkle, Thomas
TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Wickstrom, Eric and Rife, Jason P.
TITLE OF INVENTION: Trivalent Synthesis of Oligonuclectides Containing
TITLE OF INVENTION: Stereospecific Alkylphosphonates and Arylphosphonates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: DiGiglio, Frank S.
REGISTRATION NUMBER: 31,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: 516-742-4343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 400 Garden
CITY: Garden City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 2757 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US93/06251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                  2433
                                                                                                                                                                                                               2472 TACGTGGAGGAAGAT----TATTCTGAA 2495
                                                                                                                                                                                                                                                                                                                                                                                     2385 GACATCATC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2325 GCCAAAGCCCGCTATGACTTCTGCGCCCGTGACCGTTCAGAGCTGTCGCTCAAGGAGGGT 2384
                                                                                                                                                                                                                                                                                                                             66 GlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsn 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26 AlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGly 45
                                                                                                                                                                                                                                                       86 LeuvalArgGluGlnArgValTyrGlnGlu 95
                                                                                                                                                                                                                                                                                                                                                                                                                           46 GlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAla 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11530
                                                                                                                                                                                                                                                                                                  GGGGAGATCTATGGCCGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400 Garden City Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCULLY, SCOTT, MURPHY & PRESSER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19930630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.00336
91.50
52.86%
32.86%
15.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31,346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8586
                                                                                                                                                                                                                                                                                                                                                                                     AAGATCCTTAACAAGAAGGGACAGCAAGGCTGGTGGCGA 2432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                       - Griggergerrecergecaae 2471
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-300-958A-28
                                                                                                                                         SOFIWARE. Fac. SEQ ID NO 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-019-455A-49 (1-110) x US-09-300-958A-30 (1-4762)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-300-958A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 28, Application US/09300958A Patent No. 6495319 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1999-02-(
NUMBER OF SEQ ID NOS: 85
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                APPLICANT: Trenkle, Thomas
TITLE OF INVENTION: Reduced Complexity Nucleic Acid Targets and Methods
TITLE OF INVENTION: Using Same
FILE REFERENCE: P-PH 3457
CURRENT FILING DATE: 1999-04-27
PRIOR APPLICATION NUMBER: 00/083,331
PRIOR APPLICATION NUMBER: 60/083,331
PRIOR FILING DATE: 1998-04-27
PRIOR PILING DATE: 1998-08-27
PRIOR PILING DATE: 1998-08-27
PRIOR FILING DATE: 1998-08-27
PRIOR FILING DATE: 1999-08-27
PRIOR FILING DATE: 1999-08-27
PRIOR FILING DATE: 1999-08-27
PRIOR FILING DATE: 1999-08-27
PRIOR FILING DATE: 1999-08-27
PRIOR FILING DATE: 1999-08-27
PRIOR FILING DATE: 1999-08-27
                                                                                                                                                                                                               SON OF CRE TO SERVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1998-08-27
PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/083,331
PRIOR TILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/098,070
PRIOR FILING DATE: 1998-08-27
                                                                                              LENGIH: 467
TYPE: DNA
ORGENTSH: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/300,958A CURRENT FILING DATE: 1999-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
FILE REFERENCE: P-F
                              NAME/KEY: unsure
LOCATION: (428)
                                                                           FEREURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 4762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2552 CCATCCACATATGTGGAAGAG 2572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2513 TGGTGGAGAGGAGAAGTAAATGGCAGG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2465 TTGAAAGGAGATGTGGTGAAGATTTACACAAAGATG-----AGTGCAAATGGC 2512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2405 CTGGGCATTGCCATCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTG 2464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83 ProSerAsnLeuValArgGlu 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63 PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23 IleSerLeuAlaArgAlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnVal 42
                                                                                                                                                                                             Pacentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   McClelland, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Welsh, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PH 3457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.0073
91.50
52.24%
32.84%
15.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/118,624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                   밁
                                                                                            Ş
                                                                                                                                           B
                                                                                                                                                                                   Ś
                                                                                                                                                                                                                              US-10-019-455A-49 (1-110) x US-09-356-952-11 (1-5398)
                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-356-952-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-49 (1-110) x US-09-300-958A-28 (1-467)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-300-958A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Boriack-Sjodin, Ann
APPLICANT: Margarit, S. M.
APPLICANT: Margarit, S. M.
APPLICANT: Moriack-Sjodin, Dafna
APPLICANT: Cole, Philip
APPLICANT: Kuriyan, John
APPLICANT: Kuriyan, John
TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS COMPLEX AND METHODS OF USE
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 600-1-228N
CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT FILING DATE: 1999-07-19
EVALUATION TO THE PROPERTY OF THE REFERENCE: 1999-07-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11, Application US/09356952 Patent No. 6117663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER APPLICATION NUMBER: 60/093,631
EARLIER FILING DATE: 1998-07-21
NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: (462)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                      445 CTTTCTTCCTCCCCCCCGACAAGTGAGTTGACCAGCATTCGTCCAATTGGAATAGTAGTC 504
                                            505 GCTGCTTATGACTTTAATTATCCCATTAAAAAAGACAGTTCTTCGCAACTTTTGTCTGTA 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              299 ---GGAAGGAGGATGAATAAATTCAAATCCCGTGTTGCACCCTGCACCAAAATT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260 GTAAATGGCAGG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                152 GCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTGTTGAAAGGAGATGTG
43 LysLysGlyGlnGlnIleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAla 62
                                                                                       28 AlaGlnGluAspTyrAsnAlaPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48 IleTyrValTyrSerLysLeuValThrGluAsnGlyAlaGlyAlaPheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88 ArgGluGlnArgValTyrGlnGluAlaThrLysGluIleProThrThrAspIle 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28 AlaGlnGluAspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGln 47
                                                                                                                                                                              8 LeuSerSerLysLysLeuCysAlaAspGluGluCysValTyrThrIleSerLeuAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5398
                                                                                                                                                                                                                                                                                                0.178
82.50
48.31%
28.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85.00
51.28%
30.77%
14.38%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.00238
                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                          Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGGCTGGTTTCCATCCACATATGTG
                                                                                     ----AspCysArgPheIleAsnVal 42
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                             Alignment Scores:
                                                                                                                                  ; LOCATION:
US-08-164-839-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-164-839-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/08164839 patent No. 5514573
GENERAL INFORMATION:
APPLICANT: YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 2085 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Oblon, No. 5514573man
REGISTION NUMBER: 24,618
REFERENCE,DOCKET NUMBER: 10-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
                                                                                                                                                                                                                                               MOLECULE TYPE: ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                             No
..
                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (////TELEX: 248855 OPAT UR
                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (/03,...
TELEPHONE: (703)413-2220
                                                                                                                                                                                                          TISSUE TYPE:
                                                                                                                                                                                                                         ORGANISM: Pagrus major
                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 565 CAACAAGGGGAAACCATTTATATACTTAACAAA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 667 CCTCAAAACTTCGGTAGACCTTTAAGA 693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         610 TGGTGGGATGGATTAGTTATTGACGACAGTAATGGGAAAGTTAAC---AGAGGCTGGTTT 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                       nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProSerAsnLeuValArgGluGlnArg 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PheTrpAlaGlySerValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPhe 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MATSUI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAKANISHI, KAZUO
MOTOKI, MASAO
                                                                                                                                               1..2082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                    (703)412-3000
                                                                                                                                                                                                            liver
                                                                                                                                                                                                                                                                  cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-JAN-1993
                                                                                                                                                                                                                                                                                                       double
 0.796
74.00
52.50%
26.25%
12.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5514573man F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/164,839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-599-0
                     Mismatches:
                                        Conservative:
                                                            Matches:
                                                                           Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -AACTCATCTGGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-583-799-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ᅜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-019-455A-49 (1-110) x US-08-164-839-3 (1-2085)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, App
Patent No. 5607
                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/004,729

FILING DATE: 14-JAN-1993

ATTORNEY AGENT INFORMATION:

NAME: Oblon, No. 5607845man F.

REGISTRATION NUMBER: 10-599-

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                    TELEFAX: (703)413-2224
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 1/J
STREET: Arlington
CITY: Arlington
STATE: Virginia
STATE: U.S.A.
                                                                      MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 2085 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: MATSUI, HIROSHI
TITLE OF INVENTION: GENE ENCODING TRANSGLUTAMINASE DERIVED
TITLE OF INVENTION: FROM FISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                         TELEPHONE: (/UJ/--2220
NAME/KEY:
                                   TISSUE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                ORGANISM: Pagrus major
                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1339 AAGGÁGAGGGAAGTGTÁCAAGAAGGCGGGGACGCCGGGTCACAGAGCCÁTCCAACGAGÁTC 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1279 GTTTACGGCAACCÁCAGAGAAGATGTCACTCTGCACTACAAATATCCTGAAGGCTCCCAG 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1174 GAGGTGÄÄCGCTGACCATCTACTGGATCGTCCAAAAAGATGGCCAACGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1225 -----CGGAAGATCACÁGÁGGACCATGCTAGTGTGGGGAAGAACATCAGCACAAAAAGC 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88 ArgGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51 TyrSerLysLeuValThrGluAsnGlyAlaGlyAla------PheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31 AspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrVal 50
                                                                                                                            nucleic acid
EDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08583799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1755 Jefferson Davis Highway, Fourth Floor
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAKANISHI, KAZUO
MOTOKI, MASAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAGASE, KAZUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YASUEDA,
                                                                                                            linear
                                                                                                                                                                                                                                                              (703)412-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
                                                                                       cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                     435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/583,799
                                                                                                                                                                                                                                                                                                     10-599-0
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 5, Application
; Patent No. 5514573
; GENERAL INFORMATION:
APPLICANT: YASUEDA,
APPLICANT: MAKANIS;
APPLICANT: MOTOKI,
APPLICANT: NAGASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-164-839-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LOCATION: 1..2082
US-08-583-799-3
                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/004,729
FILING DATE: 14-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5514573man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-599-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)412-3000
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-019-455A-49 (1-110) x US-08-583-799-3 (1-2085)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: MOTOKI, MASAO
APPLICANT: WAGASE, KAZUO
APPLICANT: WAGASE, KIROSHI
TITLE OF INVENTION: GENE ENC
TITLE OF INVENTION: FROM FIS
NUMBER OF SEQUENCES: 72
                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FO-Oppatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARB: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, ADDRESSEE: P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1279 GTTTACGGCAACCACAGAGAAGATGTCACTCTGCACTACAAATATCCTGAAGGCTCCCAG 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1174 GAGGTGAACGCTGACACCATCTACTGGATCGTCCAAAAAAGATGGCCAACGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1339 AAGGAGAGGGAAGTGTACAAGAAGGCGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1225 -----CGGAAGATCÁCÁGÁGGACCATGCTAGTGTGGGGGAAGAACATCAGCACAAAAAAGC 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51 TyrSerLysLeuValThrGluAsnGlyAlaGlyAla------PheTrpAlaGlySer 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31 AspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrVal 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Virginia
7: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08164839
2520 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAKANISHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YASUEDA, HISASHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.796
74.00
52.50%
26.25%
12.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENE ENCODING TRANSGLUTAMINASE DERIVED FROM FISH
                                                                                                                                                                                                                                                                                                                                               US/08/164,839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KAZUO
                                                                                                                                                     10-599-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2085
```

```
Search completed: December 29, 2003, 22:08:21 Job time : 41.972 secs
                                                                                                                 S
                                                                                                                                                          문
                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                        뭥
                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                  US-10-019-455A-49 (1-110) x US-08-164-839-5 (1-2520)
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-164-839-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: cDNA to mRNA ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic
STRANDEDNESS:
TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE TYPE: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Pagrus major
                                                                                                                                                      1315 GTTTACGGCAACCACAGAGAAGATGTCACTCTGCACTACAAATATCCTGAAGGCTCCCAG 1374
                                                                                                                                                                                                                                    1261 -----CGGAAGATCACAGAGGACCATGCTAGTGTGGGGAAGAACATCAGCACAAAAAGC 1314
                                                                                                                                                                                                                                                                                                                    1210 GAGGTGAACGCTGACACCATCTACTGGATCGTCCAAAAAGATGGCCAACGA-----
                                                                          1375 AAGGAGAGGGAAGTGTACAAGAAGGCGGGGACGCCGGGTCACAGAGCCATCCAACGAGATC 1434
                                                                                                                                                                                           68 ValTyrGlyAspHisGlnAspGluMetGlyIleValGlyTyrPheProSerAsnLeuVal 87
                                                                                                                                                                                                                                                                       51 TyrSerLysLeuValThrGluAsnGlyAlaGlyAla-----PheTrpAlaGlySer 67
                                                                                                             88 ArgGluGlnArgValTyrGlnGluAlaThrLysGluIle-----ProThrThrAspIle 105
                                                                                                                                                                                                                                                                                                                                                     31 AspTyrAsnAlaProAspCysArgPheIleAsnValLysLysGlyGlnGlnIleTyrVal 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34..2121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.04
74.00
52.50%
26.25%
12.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
```